

## Aberystwyth University

### *North Wales Clinical Librarian project. Final project report*

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## **North Wales Clinical Librarian Project**

Final project report prepared by

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May 2005

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## **Executive summary for Conwy & Denbighshire NHS Trust**

### **Scope of clinical librarian activities**

The clinical librarian has worked with five multidisciplinary teams:

- The CAP (Community Assessment Partnership) team, with about 15 members, including social workers, occupational therapists, community nurses and team manager. This team met monthly.
- Lung team. Apart from one or two individuals, the team did not make many requests for searches (and work with this team has since been re-allocated).
- Nutrition team. This team of about seven met weekly and requested literature searches regularly from the clinical librarian. It was a newly formed team which communicated well. This team asked for more searches from the clinical librarian than any other team within the Trust.
- ICU team. Work with this team focused on support of the junior doctors' journal club after 2004, and this has resulted in a popular and effective journal club.
- Urology team. Progress was slow with this team, and although search requests increased (and the clinical librarian has now stopped attending the weekly meetings).

More recently the clinical librarian has started working with a palliative care team and a 'Safer Patients' initiative.

### **Scope of evaluation**

The baseline questionnaire included another Trust: 69 responses in total (72.6% response)

Interviews were held with 22 health professionals in the Trust.

The final questionnaire included another Trust: 57 responses in total, with a control group contributing 123 responses.

### **Key messages**

As the clinical librarian role developed, the administrative elements are being reduced, or at least streamlined now, with far more time being spent on literature searching in the final phase than in the main phase, and less time spent on administration, attending clinical meetings, and teaching information skills.

The evaluation showed that most health staff were happy to delegate a proportion of their searching on clinical questions to the clinical librarian. It is difficult to estimate how much time would be saved (as the clinical librarian is likely to do the searches faster, but that type of difference was not measured in the evaluation). The impact of the clinical librarian on the team was also to increase the amount of time spent by health professionals on searching. This is, of course, advantageous to clinical governance in the long term.

A very conservative estimate is that the impact is cost neutral in terms of staff time costs, although more searches are being done, more efficiently and effectively than before. A scenario calculation, taking into account the indications that doctors might delegate more searches in the future, estimates the saving for a small medical staff team as £195 per week.

The clinical librarian service has:

- Improved the willingness of health staff to do their own searches;
- Improved searching effectiveness, particularly among those who were less competent previously, or who did not use library services;
- Confirmed that the clinical librarian can save time and money for the teams, and the Trusts, particularly if the longer searches are delegated;
- Identified that many of the previous needs for evidence to support practice were unmet
- Demonstrated that there will be a period of adjustment as the 'rules of engagement' on who (clinical librarian or health professional) should do which type of search among the team, and why.

Targeted support to journal clubs has been popular and a scenario calculation, for a small journal club, indicates that clinical librarian input may provide staff time cost savings, although only for the larger journal clubs.

*'She hasn't saved us time, she's actually increased our education time, no, she's made better use of the educational time that we already had. I would say it's been invaluable on that side because previously when we were meeting up for these educational meetings, we were looking at papers uncritically, we weren't appraising them and we were probably coming to the wrong conclusions. So now we look at the papers properly and we come to the correct conclusions. So that may well save time and money and improve patient care down the line.'*

Health professionals are now more aware of recent research and developments, particularly those that matter.

The majority of the literature searches done by the clinical librarian did, or may in future, change treatment plans for patients.

The searches provide a broader perspective on the therapies being provided currently, confirming what works and identifying what might be improved.

Interviews identified one instance where costly equipment was not purchased after evidence found by the clinical librarian indicated that the cost would not be justified.

Teams that have received a clinical librarian service that has continued to develop have different views of how health library service resources should be allocated. Their preferences reflect what has worked well for their team. The teams receiving clinical librarian services favour a shift of library spending towards:

- More information skills training – the type depends on the needs of the team, with the newer teams favouring one-to-one support, and the more established teams wishing to develop critical appraisal skills training, often within a journal club structure.
- Clinical librarian supported teams would spend less on bookstock and journals, but spending on electronic journals is more likely to be preserved.



## **Overview of evidence from all sites (across North Wales)**

The quantitative evidence indicates that having clinical librarian support for a team:

- encourages staff to search for information to support clinical decisions (thus decreasing risks to patient care of unsafe decisions)
- improves search skills among all staff groups, with the greatest effect (at this stage) among the doctors
- changes team attitudes and cultures towards searching for the evidence – a more discriminating approach emerging as the norm.

## **Recommendations**

The clinical librarian service should be targeted to areas where support is appropriate and likely to be cost-effective. These include:

- Journal clubs, for junior doctors, in particular.  
(Journal clubs provide clinical governance training and critical appraisal support that is relevant to the junior doctors)
- Support of newly established multidisciplinary community teams  
(Clinical librarian may act as a neutral change agent in these situations)

Integration of the clinical librarian into a multidisciplinary team is likely to take time, and the necessary trust will take time to develop. Team champions may be necessary at the start.

The library service in the Trust will need to support a larger number of literature searches and requests for document delivery.

## **Executive summary for North West Wales NHS Trust**

### **Scope of clinical librarian activities**

The clinical librarian activities for North West Wales NHS Trust focused initially on information skills training, and this work later developed into support of journal club activities.

After initial market research in November 2003, the clinical librarian conducted a number of training sessions on various topics to different groups. These included HOWIS training for GPs, 'Introduction to Medical Information Resources' for speech and language therapists based in the community, and information skills and critical appraisal training for community staff based at various hospitals throughout Gwynedd. These training sessions were rewarding, and appreciated by those attending but a drawback has been the lack of opportunities (largely around access to ICT facilities) for the trainees to practise and consolidate skills.

The work with an Occupational Therapists' journal club once a month has evolved towards support of occupational therapists in the community. In September 2004 a palliative care journal club started, at the request of a community Macmillan nurse.

In April 2004 the clinical librarian proposed the idea of introducing "Library Clinics" - regular drop-in sessions offered to community staff in Gwynedd and in June decided to begin the marketing for the Library Clinics in Bangor.

### **Scope of evaluation**

Number of questionnaires (immediate, post training) analysed = 90  
Number of questionnaires (one month after training) analysis = 24  
Number of interviews with training and journal club participants = 12

### **Key messages**

Training sessions were very popular, and 89% of participants agreed that they were more confident and competent immediately after training. Over half believed that this increase in competence was still present after one month.

Barriers to developing skills further were mostly concerned with lack of access to ICT facilities.

Evidence found by trainees in their searches was disseminated to their colleagues, supporting clinical governance.

A conservative estimate might be that those trained spend one hour less per week on searching, but search more effectively when they do so, so that more (and better) searches are done overall.

The clinical librarian has been able to develop journal clubs to the point that they are self-sustaining, and supporting strategic clinical governance (e.g. on falls prevention)

### **Recommendations**

Initial training sessions need to have informal support to help the novices improve their searching at a pace that suits them, particularly when access to ICT makes it difficult to find regular practice time.

Targeted support to journal clubs by the clinical librarian should be increased.

## **Executive summary for North East Wales NHS Trust**

### **Scope of clinical librarian activities**

There are about 50 members of the Psychiatry team and the clinical librarian has been attending their team meetings since October 2003. There has always been a high level of response to her services. The clinical librarian has attended the weekly journal club meetings in order to facilitate literature searching and the promotion of evidence-based practice and critical appraisal. Group members have contacted her directly either for the journal club or for other research they are doing.

In Autumn 2004, the clinical librarian and the consultant agreed on a restructuring of the journal club activities. The restructuring of the journal club has resulted in the clinical librarian doing less literature searching for this group, but she provides more information training and support for critical appraisal. Her role has become central within the journal club in that she demonstrates the literature searching strategy that has been used to find relevant articles. The new format of the journal club has encouraged more active participation from attendees.

The Psychiatry team asked for more searches than any other Multidisciplinary team.

### **Scope of evaluation**

The baseline questionnaire included another Trust: 69 responses in total (72.6% response)

Interviews were held with 12 members of the Psychiatry team.

The final questionnaire included another Trust: 57 responses in total, with a control group contributing 123 responses.

### **Key messages**

Health professionals are more aware of recent research and developments, particularly those that matter.

The majority of the literature searches done by the clinical librarian did, or may in future, change treatment plans for patients.

The searches provide a broader perspective on the therapies being provided currently, confirming what works and identifying what might be improved.

The presence of the clinical librarian at team meetings and 'information sharing' should evolve into work in supporting critical appraisal and journal clubs.

Staff are willing to delegate searching, particularly searches that are urgent or important, to the clinical librarian.

The clinical librarian improves search skills among all staff groups, with the greatest effect (at this stage) among the doctors.

Journal club support by the clinical librarian should result in savings in staff time costs, as well as resulting in more effective running of the journal clubs.

### **Recommendations**

Clinical librarian support should be targeted on assisting staff in journal club activities.

**Acknowledgements**

The evaluation team are very grateful for the support of the Project Board on this project. We especially thank Jean Ryan for her considerable assistance in the evaluation work, and all the library staff who assisted in so many different ways. We are also very grateful to all those members of staff in the Trusts for taking the time to fill in questionnaires or take part in interviews.

We thank Allan Wailoo for his assistance on unit costs for health service staff.

**Abbreviations**

CAP	Community Assessment Partnership (a multidisciplinary community-based team that provided preventative services to the elderly in Denbighshire)
CASP	Critical Appraisals Skills Project
CPN	Community Psychiatric Nurse
CL	Clinical Librarian
ICU	Intensive Care Unit
MDT	Multidisciplinary Team
NST	Nutrition Support Team
OT	Occupational Therapist
PAM	Professions Allied to Medicine
PSY	Psychiatry
SHO	Senior House Officer
SLT	Speech and Language Therapist

# **1 Introduction**

## **1.1 Aims and objectives of the evaluation**

### **1.1.1 Aims**

The aim of the evaluation was to provide evidence to inform future structures of health library support for clinical governance. The evidence was obtained by showing how the clinical librarian service impacted on clinical practice, and the information seeking and critical appraisal skills of staff. In addition, the impact of the service on the health library activities was studied. Together, the impact on clinical practice, and the impact on health library activities allows some lessons to be drawn for future development of health library services in Wales.

### **1.1.2 Objectives**

The objectives were to:

- Assess which aspects of the clinical librarian services were used
- Estimate time (and money saved) through clinical librarian searches, compared with searching conducted by clinical staff
- Estimate the effect of information skills training on staff searching patterns, and time taken to search
- Examine the benefits to clinical practice (in terms of clinical governance activities and policies)
- Examine whether information skills training has affected skills and confidence
- Explain some of the factors affecting the working of the clinical multidisciplinary teams with the clinical librarian involved, and whether attitudes towards the clinical librarian changed.

## **1.2 Sample**

The scope of the project encompassed evaluation of clinical librarian activities across three NHS Trusts in North Wales:

- North West Wales NHS Trust: Information skills training sessions (also referred to as Gwynedd & Anglesey/Bangor throughout the report)
- Conwy & Denbighshire NHS Trust: work with five clinical teams (referred to as Glan Clwyd throughout the report)
- North East Wales NHS Trust: work with one multidisciplinary team (referred to as Wrexham throughout the report)

## **1.3 Timescale**

The Clinical Librarian started in post on 15 September 2003. The evaluation plans were prepared immediately after that, but the formal work could not start until March 2004, when ethics approval was obtained. The Clinical Librarian post completed in February 2005.

There was one formal meeting of the Project Board in October 2003, at Glan Clwyd, and a Progress Meeting in October 2004 in Aberystwyth, where the Clinical Librarian met with the Evaluation Team.

The start of the formal evaluation was later than originally intended as the project had to obtain ethics clearance. The Local Research Ethics Committee gave clearance in March 2004 (04/16(a)). This affected the plans for the 'before' and 'after' evaluations, as the

before stage in effect merged with the proposed mid-phase evaluation (originally scheduled to start in April 2004).

## **1.4 Changes to project scope**

Apart from the change to the start date of the survey work (from November 2003 to March 2004) there was one change at the end of the project which was not detailed in the project proposal. This involved a questionnaire survey of staff at the three sites who did not receive the clinical librarian service. This was conducted at the same time as the final phase survey work, and was intended to provide a 'control' view of the changes that may have taken place and the attitudes towards a clinical librarian service. The sampling was a convenience sample, and staff entering the library within a particular time period were asked to complete the questionnaire.

## **2 Methods**

### **2.1 Reflective practice diary**

The Clinical Librarian kept a reflective practice diary throughout the period of the evaluation (November 2003 – January 2005).

The entries were sent to one of the evaluation team who entered the text documents into qualitative data analysis software to help analyse:

- Changes in the type of activities undertaken
- Problems and opportunities at work
- Attitudes of staff towards the scope of Clinical Librarian activities
- Development of trust in multidisciplinary team working

### **2.2 Evaluation of information skills training sessions**

There were several elements to this before-and-after evaluation in NW Wales:

- Pre-session skills assessment (Appendix 1) conducted by the Clinical Librarian
- Immediate post-session assessment (Appendix 2 ) also conducted by the Clinical Librarian
- Reflective assessment on skills training (Appendix 3), questionnaire survey conducted by the evaluation team
- Interviews (n= 12) with training participants (Appendix 4), conducted by the evaluation team

### **2.3 Evaluation of support to clinical teams**

The evaluation for teams in NE Wales and Conwy & Denbighshire comprised:

- Initial baseline questionnaire survey to assess attitudes towards searching electronically (Internet and clinical knowledge databases) and willingness to spend time searching on various types of task (Appendix 5)
- Interviews (face to face n= 7) and telephone (n = 38) with members of the team, to gain more details about the effects on clinical practice of information provided by the Clinical Librarian. A random sample was taken of the members of the groups who had access to the clinical librarian services and 45 interviews were carried out (Appendix 6) with informed consent from interviewees.
- Final questionnaire survey (Appendix 7)
- Analysis of feedback from clinical staff on the literature searches conducted by the Clinical Librarian for them

In addition, the final phase included a control group evaluation of clinical librarian and other library services with:

- Questionnaire survey (Appendix 8)

## 2.4 Impact on health library service

Inter-library loan requests were analysed to assess whether the Clinical Librarian service had affected the number of requests handled by the Library or not.

## 2.5 Summary of evaluation survey activities

	Number distributed	Number returns	Response rate
QUESTIONNAIRES			
Baseline Questionnaire (clinical teams)	95	69	72.6%
Immediate feedback forms	130	90	69.2%
Post-training questionnaire	75	24	32.0%
Final questionnaire	74	57	77.0%
Final questionnaire (control group)	150	123	82.0%
INTERVIEWS	N W Wales	Glan Clwyd	Wrexham
	12	22	11

*Table 1 Response rate summary*

Team response to the baseline survey varied from under 50% (ICU) to 100% (Nutrition).

	Wrexham (n=50) %	Glan Clwyd (n=39) %	N W Wales (n=34) %
Doctors	50.0	48.7	50.0
Nurses	20.0	18.0	17.7
Allied health	18.0	10.3	20.6
Student	6.0	12.8	0
Admin	6.0	0	0
Other	0	10.3	11.8

*Table 2 Distribution of control group responses by staff group*

## 3 Results

Results are organised to answer the questions set for the evaluation. The evaluation was both formative and summative. The formative evaluation work was concerned with the experience of those involved, principally the Clinical Librarian, the teams she worked with, and the staff who received information skills training. The evaluation was also summative in the sense that the evaluation assessed whether the clinical librarian service had a positive measurable effect on clinical governance in the Trusts. Comparison measures were made to assess whether there were before and after changes among the teams involved in the project. The final phase also compared attitudes of staff towards library services, comparing those who had experience of clinical librarian services with those who had no experience.

### 3.1 How was the clinical librarian service used?

#### 3.1.1 Use of the clinical librarian service

Of the 45 respondents who were interviewed, 40 (89%) had used the services of the clinical librarian. Of the five (11%) who had not, four intended to use her services in the future.

The services provided by the clinical librarian were categorised into four groups:

- searches carried out by CL on behalf of an individual or a team (53%)



- training on medical information skills or critical appraisal (for a group) (31%)
- individual help with searching techniques to prepare a seminar or research paper (11%)
- assistance with the running of a journal club (13%)

Of these, the main service used by the interviewees was requests for searches carried out by the clinical librarian.

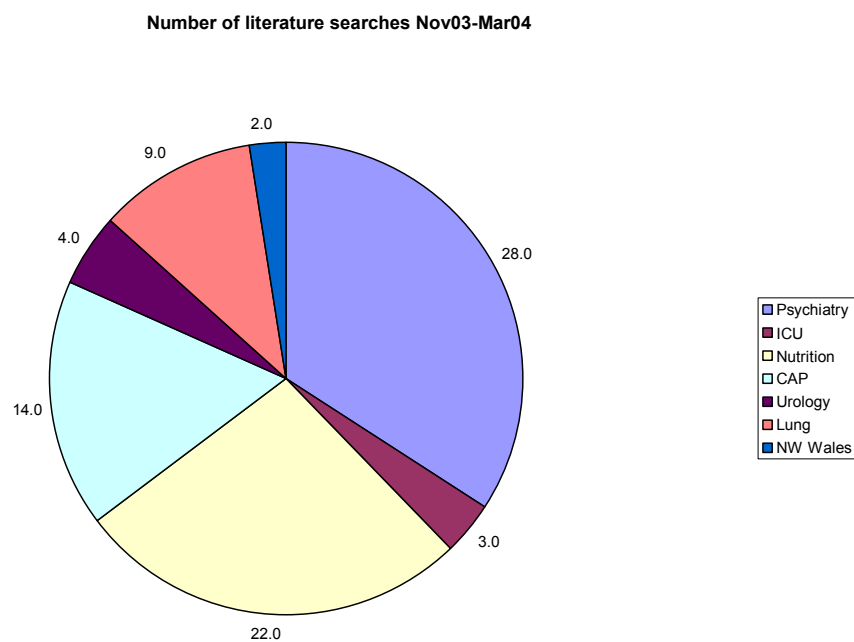
### 3.1.2 Searches conducted by clinical librarian for teams

All the teams (apart from the Training team) asked the clinical librarian to carry out individual searches.

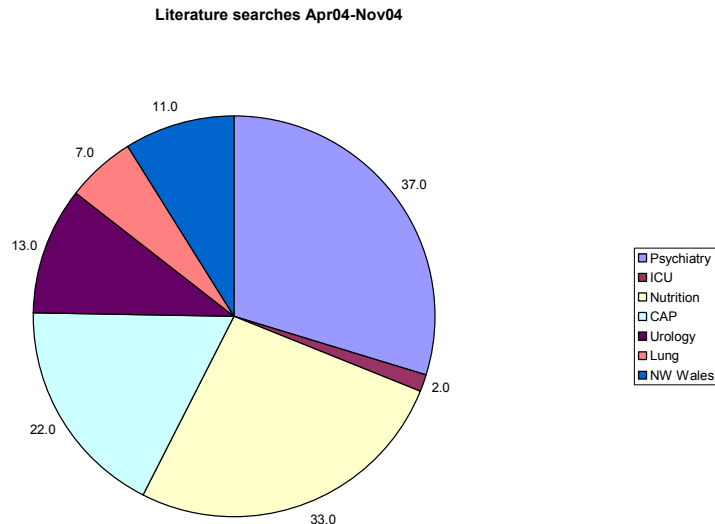
The majority of the searches were carried out for the purpose of clinical practice, followed by searches for guidelines or protocols. Other searches were in connection with research and team working.

The subject matter of the searches was mainly related to patient management and therapy, followed by staff team management.

Of the 82 searches in the initial phase (Nov03-Mar04) most were conducted for the Psychiatry team, followed by Nutrition (Figure 1).

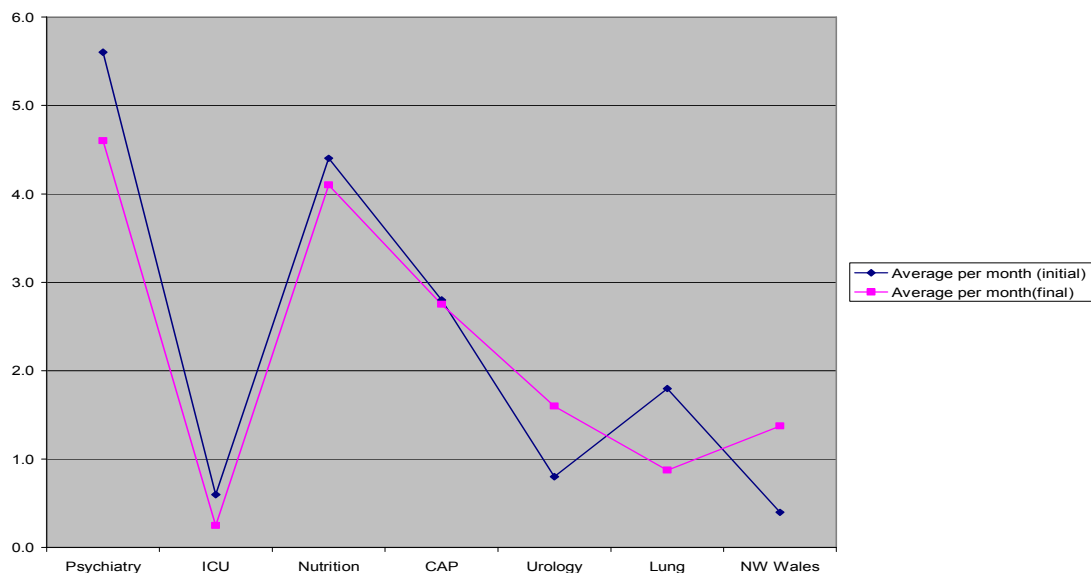


*Figure 1 Initial phase literature searches*



*Figure 2 Final phase literature searches*

Of the 125 searches conducted in the final phase (Apr-Nov04, 15.6 searches per month), the Psychiatry and Nutrition teams continued to request the most searches. Although the numbers for the ICU team are very low, the clinical librarian regularly helps the trainees with literature searching for the journal club but these have not been counted in the literature searching figures. The number of request for literature searches from the Community/Training group in Gwynedd has increased (Figure 1 and 2) mainly due to the clinical librarian's greater involvement with journal clubs. Although figures for average requests per month are given (Figure 3) these are only as a guide since meetings are often cancelled or postponed, so there are not always four meetings per calendar month. The total number of searches (Sep 2003 to Dec 2004 )was 218 (13.6 per month overall).



*Figure 3 Average number of literature searches per month*

### 3.1.3 Training and support in critical appraisal

Twelve of the respondents (in the Training team) had received training in the community by the clinical librarian. Ten had attended medical information resources training and two

critical appraisal training. The ICU group and psychiatry group also received critical appraisal training (and some database searching training) within their journal clubs.

*'And she would then go and get the papers on those and using those would teach us different aspects of critical appraisal of the papers. So she would take a different aspect of this every fortnight. So the first maybe six months or so were very much done in terms of teaching and these meetings were attended by most of the intensive care consultants, a number of anaesthetic consultants and the majority of the junior staff, all of those who were able to attend.'*

#### **3.1.4 Individual support**

This clinical librarian service was used by the ICU and Psychiatry groups in preparation for individual seminar presentations at the journal clubs.

*'For this case presentation of mine which is today, I've been in touch with Jean Ryan last week. I happened to sit with her to search the literature and so far I found it very useful. She has given me the clues as to how to go about it, the searching strategy and things like that.'*

#### **3.1.5 Assistance with the running of a journal club**

The clinical librarian assisted the ICU and psychiatry groups with the running and/or restructuring of their journal clubs. '

*'What we have set up with her is..... she's helping us with our journal club so she has initially provided us with some teaching lectures in looking for evidence and how to assess evidence for quality. And later we went on to..... basically we used her services.'*

Assistance was also given to a Macmillan nurse for the setting up of a new palliative care journal club.

*'I came in a post and my role is to take education into the community hospitals. And so I just thought there's got to be somebody out there can help me with a little bit of this. So I went to the library in Bangor and spoke to the librarian and she gave me Jean's contact number.'*

#### **3.1.6 Overview of work with the Psychiatry team**

There are about 50 members of this team and the clinical librarian has been attending their team meetings since October 2003. In general she has been happy with this group as there has always been a high level of response to her services. She has attended the weekly journal club meetings in order to facilitate literature searching and the promotion of evidence-based practice and critical appraisal. Group members have contacted her directly either for the journal club or for other research they are doing.

At one time she became a little concerned about the amount of searches she was being asked to carry out for this group as these were very time-consuming (see Figures 1, 2, 3). She also wasn't receiving much feedback from those who had requested searches.

And then in August 2004 after discussions about the restructuring of the ICU journal club, the clinical librarian wrote to one of the consultants concerned with the running of the Psychiatry Journal Club and suggested that perhaps it could be restructured along similar lines. The consultant agreed to this as it was felt that the club needed more structure and direction and that there should be a particular emphasis on critical appraisal. So a new format including the use of the CASP checklists was introduced which involved the trainees carrying out their own literature searches with the help of the clinical librarian. The restructuring of the journal club has resulted in the clinical librarian doing less literature searching for this group (Figure 3) but she provides more information training and support for critical appraisal. Her role has become central within the journal club in

that she demonstrates the literature searching strategy that has been used to find relevant articles. The new format of the journal club has encouraged more active participation from attendees.

### **3.1.7 Overview of work with the CAP team**

The CAP (Community Assessment Partnership) team consists of about 15 members, including social workers, occupational therapists, community nurses and team manager. Right from the start the clinical librarian was happy to be involved with this "new and pioneering group". She commented that the multidisciplinary aspect was excellent and that it was very much patient-centred, providing preventative services to the elderly in Denbighshire. Although she felt very much part of the team, the fact that they only met once a month was sometimes problematic in keeping the momentum going. However the team did contact her individually themselves and emailed her or sometimes dropped in to see her. She found that there was quite a consistent amount of work with them, whether it was for individuals such as an OT or social work perspective or whether it was for research for the team as a whole because they were working on their own evaluation. Occasionally the clinical librarian expressed concern that one or two members of the team were becoming too dependent on her for literature searches. She is aware of individual research interests and needs and if she comes across anything relevant is proactive in sending it out to them. The CAP team are particularly happy with her proactive role. The team members mention their appreciation of Glan Clwyd library services in general and the clinical librarian is very pleased with this as it may be evidence that the CL service has a knock-on effect for library services in general.

There were no significant changes in the way the service evolved with regard to the CAP team. The team members often expressed their appreciation of the CL services and their hope that the service will continue and that the clinical librarian will continue to be part of their team. (See also Section 3.2.11).

### **3.1.8 Overview of work with the Nutrition team**

This is another team in which the clinical librarian felt truly integrated. This team of about seven met weekly and requested literature searches regularly from the clinical librarian. It was a newly formed team which communicated well. One member of the team was sceptical at first as to how someone without a medical or clinical background could provide clinical information but was very soon reassured and is very happy with the service. As early as November 2003 the clinical librarian felt part of the team particularly when she was asked to pose for a team photograph. Regularly at meetings the members of the team expressed their appreciation of the clinical librarian service often stating that it saved them so much time. In her reflective diary in November 2004 the clinical librarian noted that one of the specialist nurses had made the comment that "the nutrition team would never have progressed this far without the clinical librarian support". The clinical librarian had very positive feelings about this team (See also Section 3.2.11)

### **3.1.8 Overview of work with the Lung team**

The Lung MDT has been the biggest disappointment to the clinical librarian as the team did not make good use of her services. One member of the team was very supportive and often requested literature searches. And two of the nurses also made a few requests and gave positive feedback to the clinical librarian. However at most of the Lung MDT meetings that the clinical librarian attended, no requests were made and she began to feel that it was a waste of her time. The team did show some positive signs of improvement towards the end of 2004. But one of the consultants who had noticed how few requests and little feedback the clinical librarian received explained that it could be due to the pressure they were under because of the ever-increasing number of patients on the Cancer services MDT lists. By January 2005 the clinical librarian felt that she should no longer waste her time at these meetings and after discussion with her line manager, decided to devote her time to other matters and to staff who had requested her

services. (e.g. Health Foundation's Safer Patients Initiative and a palliative care group). (See also Section 3.2.11)

### **3.1.9 Overview of work with the Urology team**

For the first six months this team (of approximately nine members) hardly made use of the clinical librarian services but the clinical librarian commented in February 2004 that despite this she did feel part of the team. At this time she also noted that "very seldom do they ever interrogate their need for evidence". By the autumn of 2004 there was a better response from the team with positive feedback on searches carried out and an increasing trust in the clinical librarian's abilities. Although this was encouraging for the clinical librarian, she felt that the meetings were "getting longer and longer with a more stressful atmosphere". (After the evaluation period, the clinical librarian stopped attending these weekly Urology MDT meetings, and time had to be found for new projects and the new involvement in the Health Foundation's Safer Patients Initiative). (See also Section 3.2.11)

### **3.1.10 Overview of work with the ICU team**

The clinical librarian's initial contact with the ICU team (of approximately 20) was to attend their clinical meetings and carry out literature searches when requested to do so. During November 2003 the CL had conflicting feelings about her relationship with this team. When no one turned up at an ICU meeting and they didn't let her know she commented that she was "not yet thought of as an 'integral' member of the team!" But on another day after a successful meeting, she felt as if she was "making a positive impact with this team". Then it was decided that it would be more beneficial if the CL attended their journal club instead and provide information skills and critical appraisal training. At first she found the prospect of being the "teacher" of critical appraisal a little daunting but after careful preparation of training sessions, and later undergoing extra training herself, she felt confident in her ability to provide this service and received very positive feedback from it. In August 2004 the journal club was restructured with the clinical librarian's input and everyone concerned appreciated the new format. It was decided that the trainees should each come up with a clinical question and then make an individual appointment to see the CL to go through the literature searching process. They would then give a presentation on the evidence found and explain their searching process. It was agreed that the clinical librarian should attend the journal club every second week when the emphasis would be on how the evidence was found and assessed and the critique would be more rigorous. The clinical librarian was really pleased with this development as it gave her the opportunity to help to develop the trainees' skills. Although the work was very time-consuming as it involved a number of sessions with the trainees, she believed that they were learning a lot from the one-to-one sessions and that it was time well spent. In fact everyone appreciated the newly structured journal club and one consultant commented *"meetings which we didn't particularly like going to before, now are a sell-out. They're very well attended. People talk very frankly and they talk from facts rather than from opinion and they learn."* The consultants in the group often mentioned that they hoped the clinical librarian service would continue, particularly to support the ICU group.

### **3.1.11 Overview of training activities in North West Wales**

In November 2003 the clinical librarian spent time making contact with different groups in Gwynedd to ascertain where her services may be needed and what type of training would be required. During the first few months she conducted a number of training sessions on various topics to different groups. These included HOWIS training for GPs, 'Introduction to Medical Information Resources' for SLTs based in the community, and information skills and critical appraisal training for community staff based at various hospitals throughout Gwynedd. Although she found these training sessions very rewarding *"there's an instant gratification almost, that you know people are appreciative and you can see the results"*, she also felt frustrated at the lack of IT access in some hospitals. She commented that in one community hospital in particular, *"there was only one computer*

*with internet access and although each ward has a computer with intranet access many did no know how to use it."* Although staff were always very appreciative of her training, sometimes the clinical librarian was disappointed with the turnout at the training sessions. Quite a lot of the clinical librarian's time was spent in marketing, trying to follow up more leads.

In November 2003 she started to attend an OT journal club once a month and facilitated their critical appraisal of articles. She really enjoyed working with this group as they were enthusiastic and responsive. At one meeting they asked for the clinical librarian's input in researching tools and critically appraised the evidence found. This was very pleasing to her. *"So I seem to be an integral part of the decision-making process in this respect. I am so happy to be able to have this impact and to realise my services will make a direct difference to patient care."* The OT members of the journal club greatly appreciated her services. *"They say that without my help they would never follow these issues through and it is "forcing" them to keep up to date with the research and evidence."*

In April 2004 the clinical librarian proposed the idea of introducing "Library Clinics" - regular drop-in sessions offered to community staff in Gwynedd and in June decided to begin the marketing for the Library Clinics in Bangor.

In August a community Macmillan nurse based in Gwynedd contacted the clinical librarian to ask for her assistance and support in setting up a palliative care journal club for community nurses. This club started in September 2004 and the clinical librarian explained how she could help them with EBM and be a forum for developing their skills. She found the nurses *"extremely receptive and enthusiastic"*.

In January 2005 the clinical librarian was frustrated at the sad lack of response to the marketing she had sent out before Christmas. Later in the month she responded to a request to help set up a physiotherapy journal club and give an introduction to critical appraisal. The clinical librarian expressed her worries about whether her contract will be renewed and how her role will evolve with the three Trusts. She felt that funding would be a problem. She said that she *"would prefer to be in the position of offering the service to those who need it most and would make the most use of it... I would love to be able to continue with the OT journal club though as it is an excellent group and I feel we are really having an impact on care and making great headway."*

So the emphasis of the clinical librarian's work in Gwynedd has changed since the early days. Although she still provides training sessions in the community, more recently there has been a demand for her services in facilitating journal clubs. Her involvement with the OT journal club based at the hospital in Bangor was postponed indefinitely at the end of July 2004, by which time all members of the club had become very competent in critical appraisal. Instead a community-based OT research group was set up which met twice a month, and this has progressed to the point of developing a resource pack for falls prevention, as part of a falls prevention strategy for the Trust.

### **3.1.12 Problems encountered by the clinical librarian**

For a period over Summer 2004, she was frustrated by IT problems resulting in lack of internet connection and felt that she couldn't perform her job to the best of her ability. However these problems were resolved when the library connections were set to a new server. Another IT related problem was that when holding training sessions in Gwynedd she couldn't use her laptop with their network and was very much dependent on them having a free computer for demonstration purposes that could connect to her laptop and projector.

Her experience working with the Lung MDT (and in the first few months, the Urology MDT) was disappointing. She found it frustrating sitting in meetings and being ignored when she could be doing so many other different things. To a certain extent this was resolved as the teams made more use of her services. And then in January 2005 she

stopped attending these two group meetings because she felt that she was wasting her time and could put her energy into other activities.

### 3.1.13 Gaining trust and team working.

Much has been written about different stages of collaborative working. Hudson et al<sup>1</sup> describe a 'collaborative continuum' which they developed from a combination of three main sources and which combines the two key dimensions of degree of integration and degree of trust. The 'continuum' between lower level of trust and higher level of trust ranges from *isolation/encounter*, through to *communication*, *collaboration* and finally, *integration*.

It could be argued that the clinical librarian's initial contact with some of the groups would be characterised by the isolation/encounter stage, with loose-knit connected networks, infrequent and *ad hoc* interactions, divergently perceived organisational goals and interests and inter-professional rivalry and stereotyping. She noted in November 2003 that at an ICU Meeting - *"No one turns up!! Not too happy about this. No one turned up for the meeting and I had prepared a draft of my presentation for Thurs. so they could go over it and give me feedback/suggestions. It's a bit much not to even contact me to let me know they're not going to show. I guess this shows that I am not yet thought of as an "integral member of the team!!!"* The clinical librarian (gradually in some groups, more quickly in others) built up trust within each group and moved along the 'continuum'. One of the ways she did this was to be proactive. She took the lead and learnt about the interests of team members so that when she found information that was of interest to an individual she would send it to them. This type of action is described by Grossman and Larson<sup>2</sup> who provided a framework in which to explore the levels of relationship that exist within institutions between hospital librarians and information systems (IS) staff. They devised the "knowing/caring ladder" to illustrate stages of relationship and possibilities for team building.

*"Professional relationships that lead to team building are vital, because the strength of the team depends upon the quality of the relationships among its members."*

The stages in the "knowing/caring ladder" are "don't know = coexist", "know, don't care = collaborate", "know and care = cooperate". Grossman and Larson suggest that at the coexistence level each 'side' may know of the other's existence but understand little about its professional responsibilities and thus seem not to care. Therefore by taking the lead and being proactive the clinical librarian built up trust within the teams and moved to the 'collaborate' and 'cooperate' levels. These are equivalent to the 'collaboration' and 'integration' levels in the model of Hudson et al, the latter level being achieved when there is a very close knit and highly connected network and a very high degree of mutual respect and trust and mainstream joint working arrangements.

The clinical librarian commented:

*".... initially it was very much literature searching, going to the meetings, waiting to be asked to do something and probably not as proactive as it is now. I think now I'm very much more aware of what the teams are interested in and what they're looking at so if things do crop up I can send them to them. You know I don't have to wait to be asked."*

It would appear that 'integration' occurred very quickly in the clinical librarian's interaction with the Nutrition team, the CAP team and the OT journal club, and was soon achieved in

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<sup>1</sup> Hudson B., Hardy B., Henwood, M. and Wistow G. (1997) Inter-agency collaboration: primary health care sub-study. Leeds: Nuffield Institute for Health, December 1997

<sup>2</sup> Grossman, J. and Larson, B. (1996), Team building with information system departments: a hospital librarian's experience in coexisting, collaborating and cooperating. Bulletin of the Medical Library Association 84 (2) April 1996 196-199

the Psychiatry team. The restructuring of the Psychiatry journal club enabled the clinical librarian to be proactive and now she has a 'central role' within the team. Although with the ICU team she did not feel an integral member of the team at first, through the development of her own critical appraisal skills and her contribution to the restructuring of the journal club she became more confident and was highly regarded by the consultants in the team. In the Grossman and Larson model this would be categorised at the "know and care = cooperate" level which, quoting Flexner, states "Cooperate: to work or act together or jointly for a common purpose or benefit; to work or act with another person or persons willingly and agreeably."

The clinical librarian's working liaison with the Lung MDT could probably be regarded as being between the "coexist" and "collaborate" levels of the "knowing/caring ladder" or at the "communication" level of the Hudson et al model i.e. limited acceptance of the notion of membership of a team. After a slow start, trust was built up with the Urology MDT and the "collaboration" level of the Hudson et al model was reached in that there was "an acknowledgement of the value and existence of a team, and agreement on the membership of it."

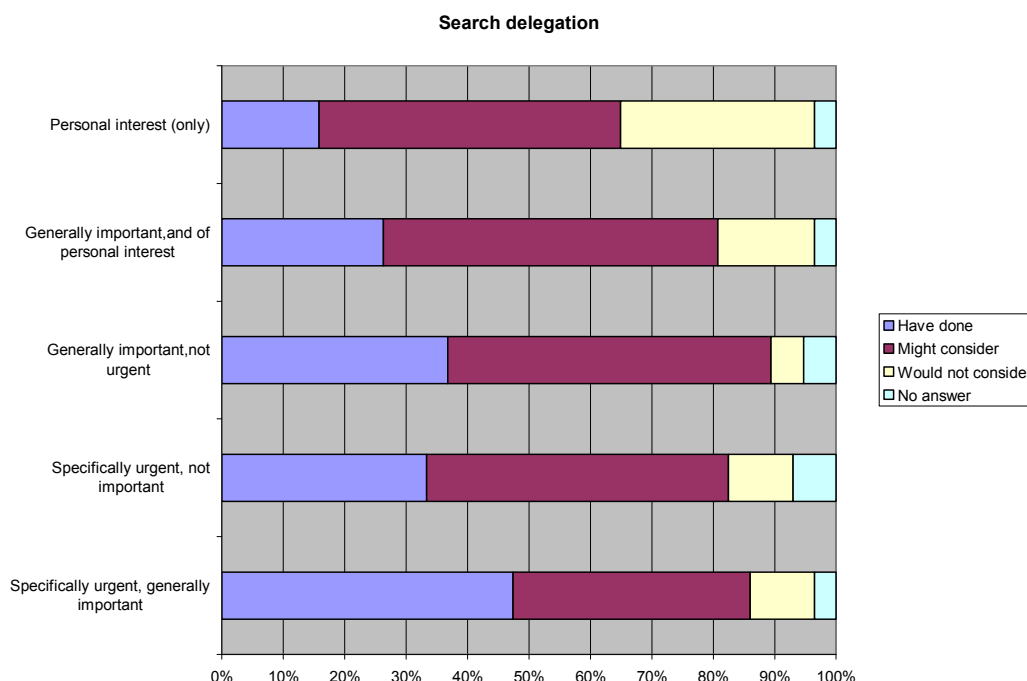
In conclusion the clinical librarian is happy with the way her role has evolved with the development and restructuring of the journal clubs and an increase in training in critical appraisal. She feels that this seems to be a very cost-effective use of her time as she has received feedback on how it (particularly critical appraisal training) has resulted in the saving of money for the NHS and changes in policy and clinical practice.

#### **3.1.14 Delegation of searching to clinical librarian**

The final questionnaire asked the teams how willing the respondents (n=57) would be to delegate searches to a clinical librarian. The type of searches were categorised according to urgency, importance and personal interest. Results (Figures 4, 5, 6, 7) show that the team members are most likely to have delegated searches that are specifically urgent (for an individual patient) and important for patient care in general. However, over 50% might consider delegating searches that are important for patient care in general, but not urgent. Team members were less willing to delegate searches that were of some personal interest to them, and fewer had in fact delegated searches of this nature. Over 50% might consider delegating such searches if they were also of importance to patient care in general, indicating a considerable demand for such searching.

The general popularity of the service is confirmed by the number of respondents who would recommend the service to others. Only 2% of the respondents would not recommend the service, 5 % were unsure and 89% would recommend the service (4% did not answer the question).

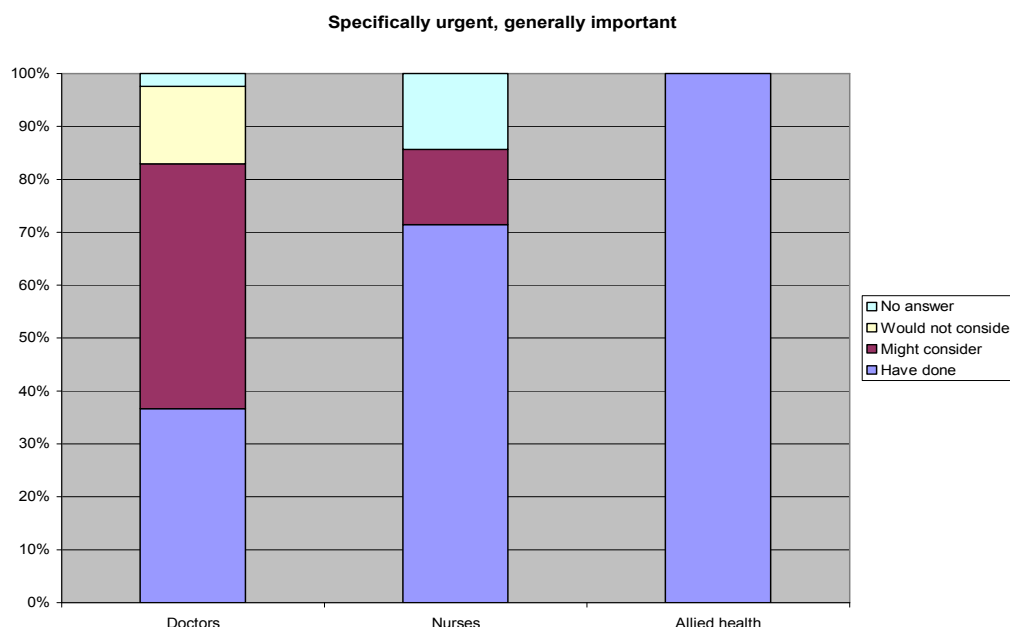




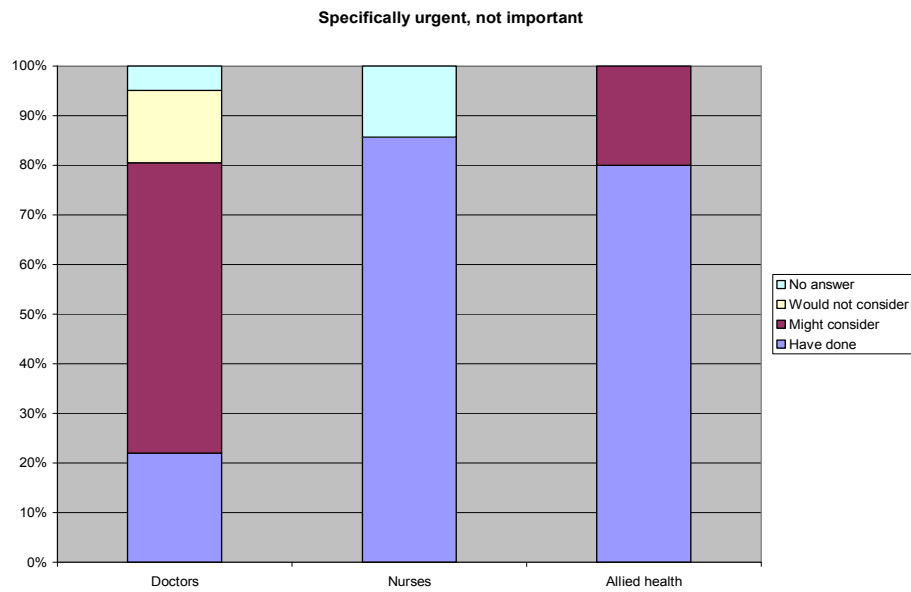
*Figure 4 Willingness to delegate searching to clinical librarian*

### 3.1.15 Professional differences towards delegating searches

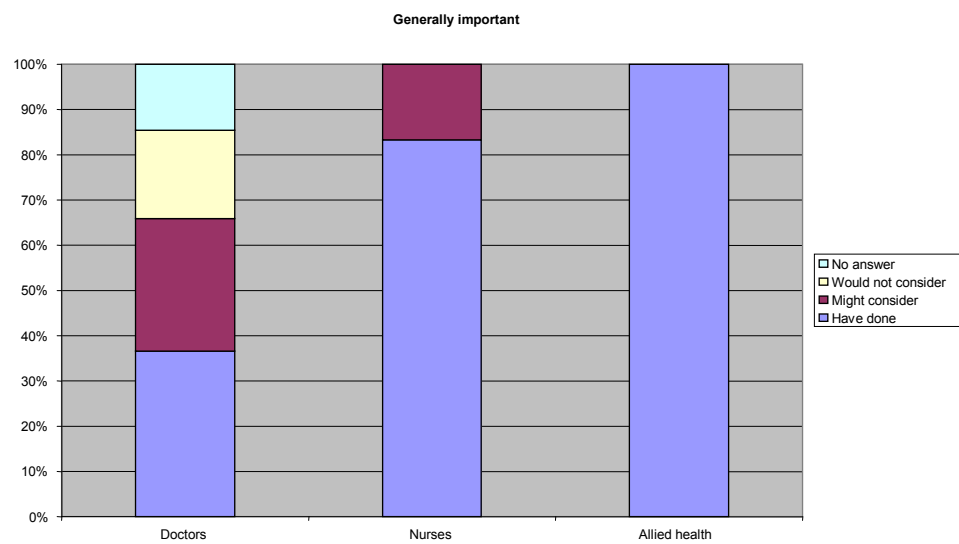
The small numbers of nurses (n=7) and allied health staff (n=5) mean that comparisons among professional groups are at best indicative. There are probably very few differences among the professional groups, although Figures 5-9 suggest that nurses and allied health professionals may be more willing to delegate searches than doctors. This would need to be verified in a larger sample.



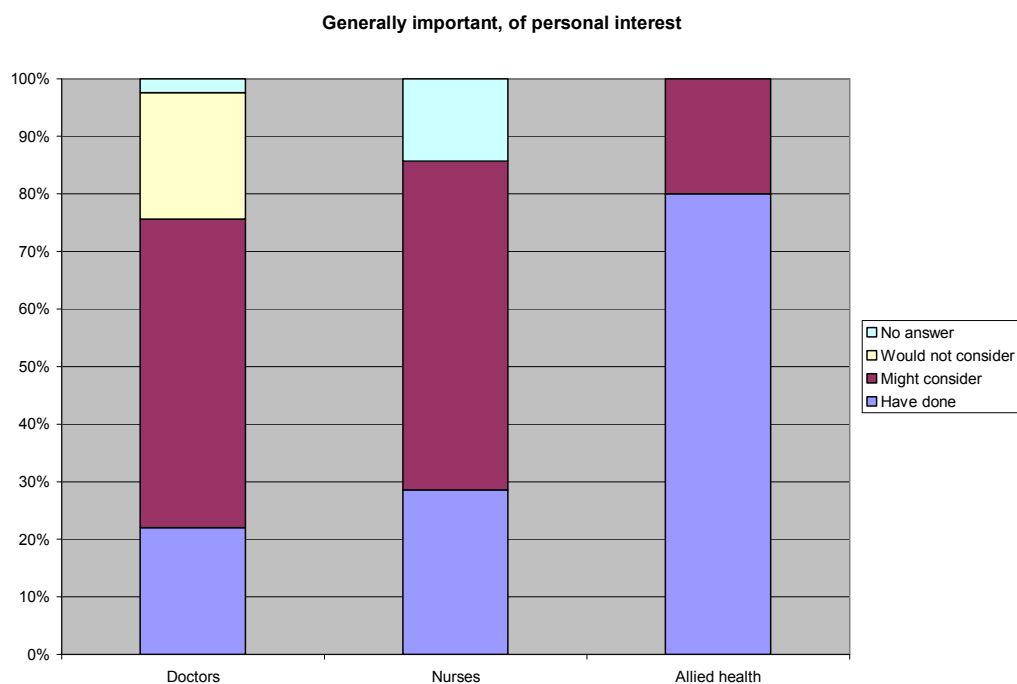
*Figure 5 Delegation of specifically urgent and generally important searches*



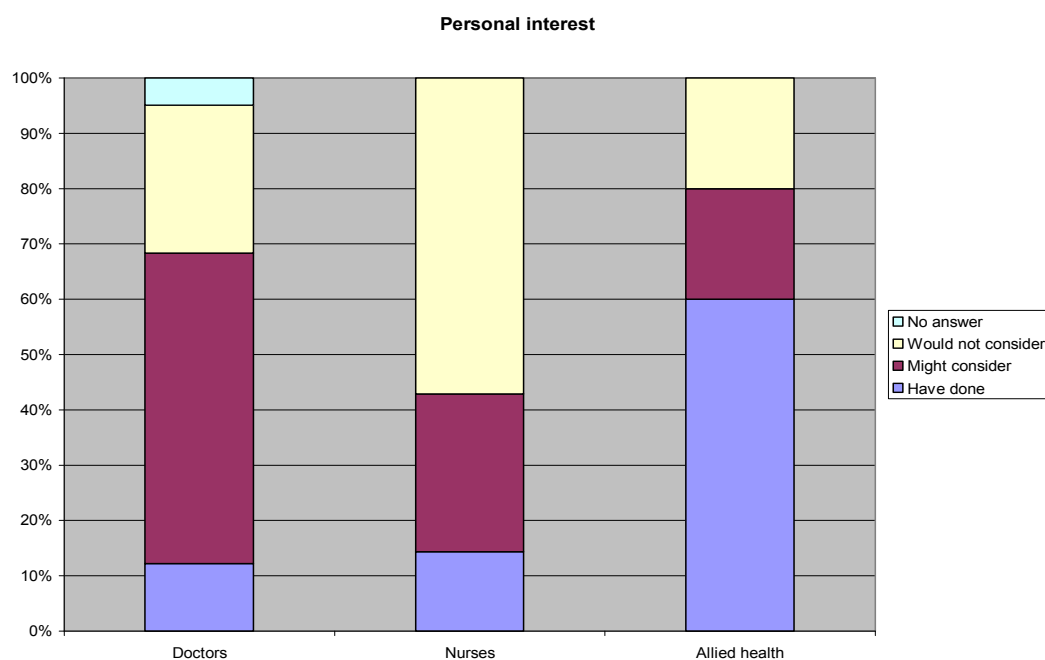
*Figure 6 Delegation of specifically urgent, not generally important searches*



*Figure 7 Delegation of generally important, non-urgent, searches not of personal interest*



*Figure 8 Delegation of generally important searches of personal interest*

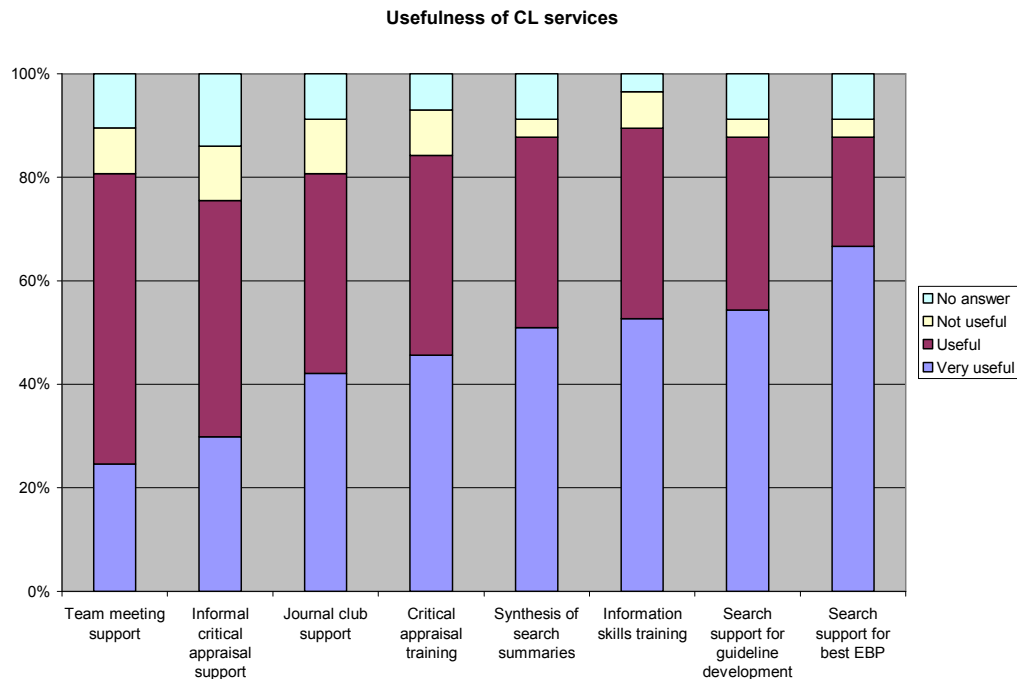


*Figure 9 Delegation of searches of personal interest (only)*

### 3.1.16 Perceptions of the usefulness of various CL services

There are several ways in which clinical librarian services may be organised, and most of the services which have developed in the UK have focused on different aspects of clinical governance support. The teams were asked for their perceptions of the usefulness, or potential usefulness of a range of services. The comparatively high number of missing

responses to some question categories (Figure 10) indicates that some respondents had no experience at all of such services and felt unable to speculate. The type of clinical librarian services that seemed most useful to the respondents were those which were most obviously linked to clinical governance activities (guidelines, supporting EBP, and information skills training). The activities which in fact support such work, such as team meeting support, informal critical appraisal support, and journal club support were less likely to be rated as 'very useful', although among certain teams the latter two activities were becoming very important (Section 3.1.10, 3.1.11).



*Figure 10 Perceived usefulness of clinical librarian services (final survey)*

### 3.1.17 Building trust

The data from the reflective practice diary complements the quantitative data on preferences for delegating searches, and satisfaction with clinical librarian services.

- Attending team meetings and 'information sharing' should evolve into work in supporting critical appraisal and journal clubs
- Staff are willing to delegate searching, particularly searches that are urgent, to the clinical librarian.

## 3.2 Attitudes of staff in CL-supported teams towards searching

### 3.2.1 Attitudes of doctors towards searching for information (baseline)

The majority (87.0%) of medical staff (n=46) used the Internet, and search engines ((84.8%) although fewer (56.5%) used the Library and HOWIS websites. Most (63.0%) doctors were overwhelmed by the amount of information retrieved, and most (73.9%) did not always find what they wanted on an Internet search. There was no great preponderance towards printed or electronic resources, with 52.2% using printed sources more than electronic sources, and 41.3% using electronic sources more than printed resources. Slightly more than half (54.4%) reported that they mostly used databases and resources such as MEDLINE, the Cochrane Library and HOWIS. Few (10.9%) reported receiving library skills training, but a greater proportion (39.1%) usually asked a librarian

for help. The baseline survey was undertaken six months after the Clinical Librarian had started working with the teams, and this may account for the relatively high proportion of doctors indicating that they asked for the assistance of the librarian.

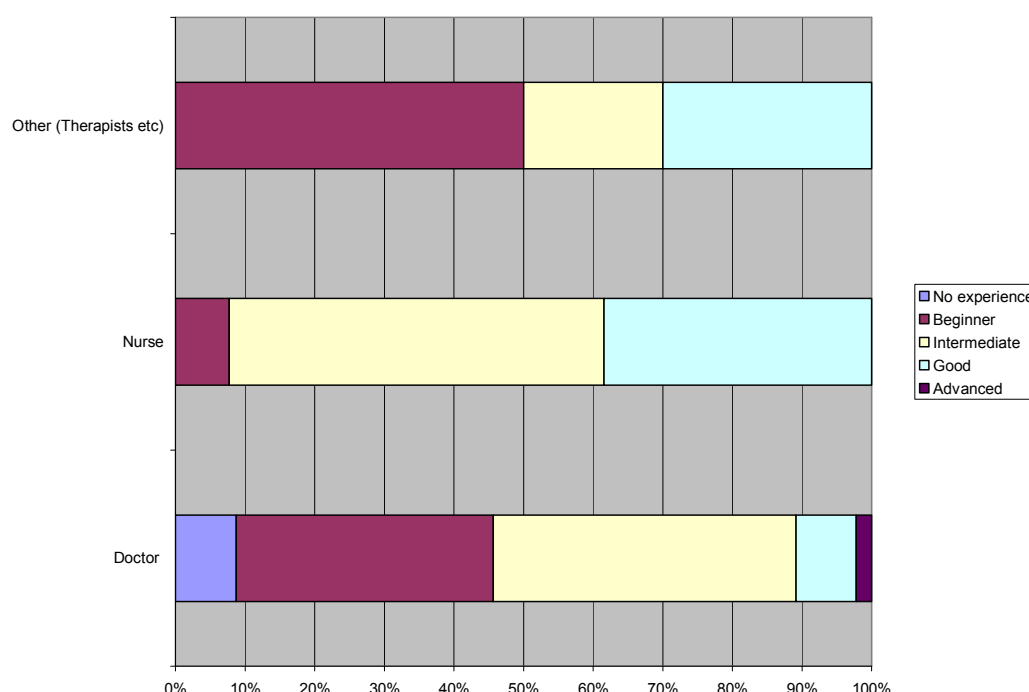


Figure 11 Internet search skills ratings (baseline)

### 3.2.2 Attitudes of nursing staff towards searching for information (baseline)

Responses from nursing staff were obtained from the CAP team, Psychiatry, Lung and Nutrition teams (n=13), with no nurse respondents from Urology or ICU. All the nurses used the Internet, and search engines and nearly all (12/13, 92.3%) used the Library website. Most (61.5%) nurses were overwhelmed by the amount of information they retrieved (a similar proportion to the doctors). Most (76.9%) reported that they did not always find what they wanted on the Internet. The nurse respondents made more use of electronic databases and resources than the doctors (61.5% used these regularly, compared to just over half the doctors), but they also used printed resources more than the doctors did (61.5% compared to around half the doctors). More reported receiving library skills training (38.5% compared to 10.9%) and more (61.5%) reported that they usually asked a librarian for help. Like the doctors, most nurses rated their skills on Internet searching as intermediate (Figure 11) but a higher proportion rated their skills as good, possibly reflecting the greater proportion who had received training.

### 3.2.3 Attitudes of therapists and other staff towards searching for information (baseline)

Most (90%) of the other staff (n=10) surveyed used the Internet and search engines (80%). Fewer (30%) used the Library website. Half (50%) reported being overwhelmed by the amount of information they retrieved, and most (80%) reported that they did not always find what they wanted on the Internet. The therapists within the group used databases regularly. The group were more equivocal about preferences for print over electronic resources than the nurses and doctors. None had received library skills training, and this is reflected in the higher proportion of beginner ratings of searching

competence in this group. Less than half (40%) reported that they usually asked a librarian for help.

### 3.2.4 Attitudes of doctors towards searching for information (final)

Of the 41 respondents in the final survey, 70.7% reported using NHS/library websites, a higher proportion than in the baseline survey. A higher proportion feel overwhelmed by the amount of information retrieved (68.3%) than at baseline. Although only 26.8% report having received library skills training, this is much higher than the baseline figure of 10.9% (Figure 12). There has been a slight shift upwards in Internet searching skills, with nobody in the final survey reporting no experience. The composition of the two groups is not the same as many of the junior doctors in the baseline study had left by the time the final phase started.

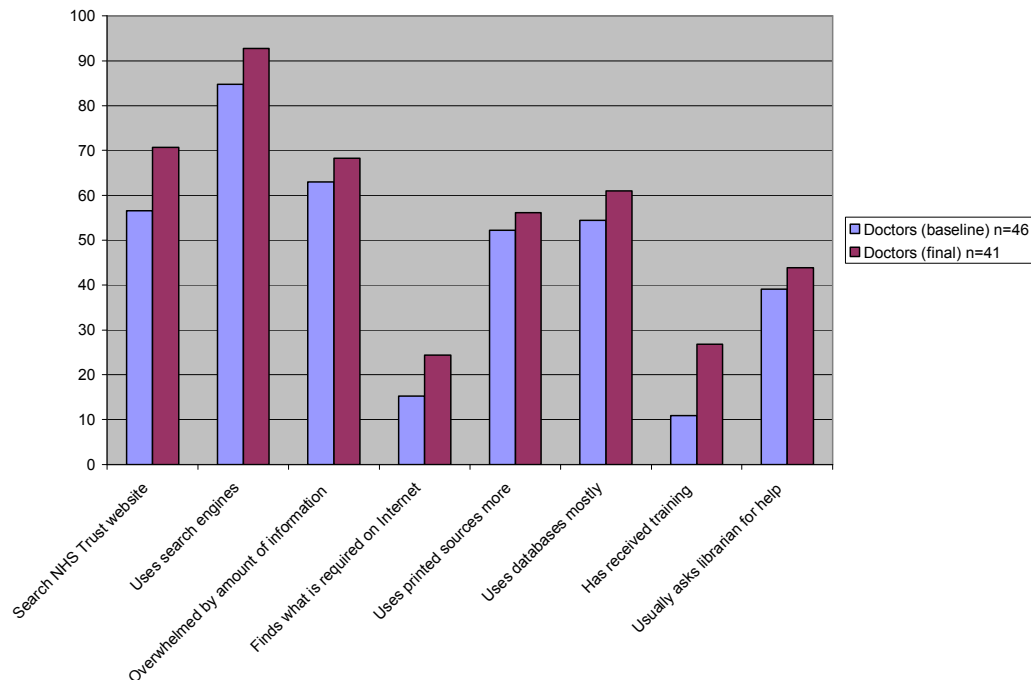


Figure 12 Baseline and final attitudes of doctors on searching

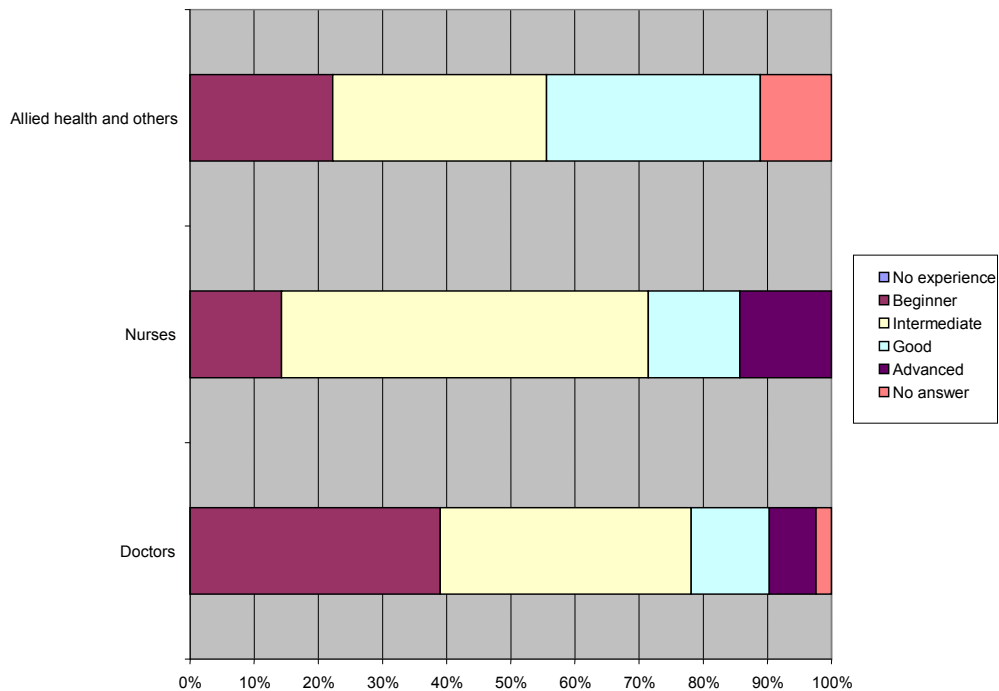


Figure 13 Internet search skills ratings (final)

### 3.2.5 Attitudes of nursing staff towards searching for information (final)

No responses were obtained from the Psychiatry or ICU teams, and the number of responses (n=7) is comparatively small. In contrast to the responses from the doctors, the responses of the nurses were less positive. A lower proportion had received skills training, or searched NHS/library websites, or used search engines, or usually asked library staff for help than in the baseline survey. No nurses in the baseline survey reported having advanced Internet searching skills, but in the final survey one individual did. As in the baseline survey, most nurses rated their skills as intermediate. (Figures 13 and 14).

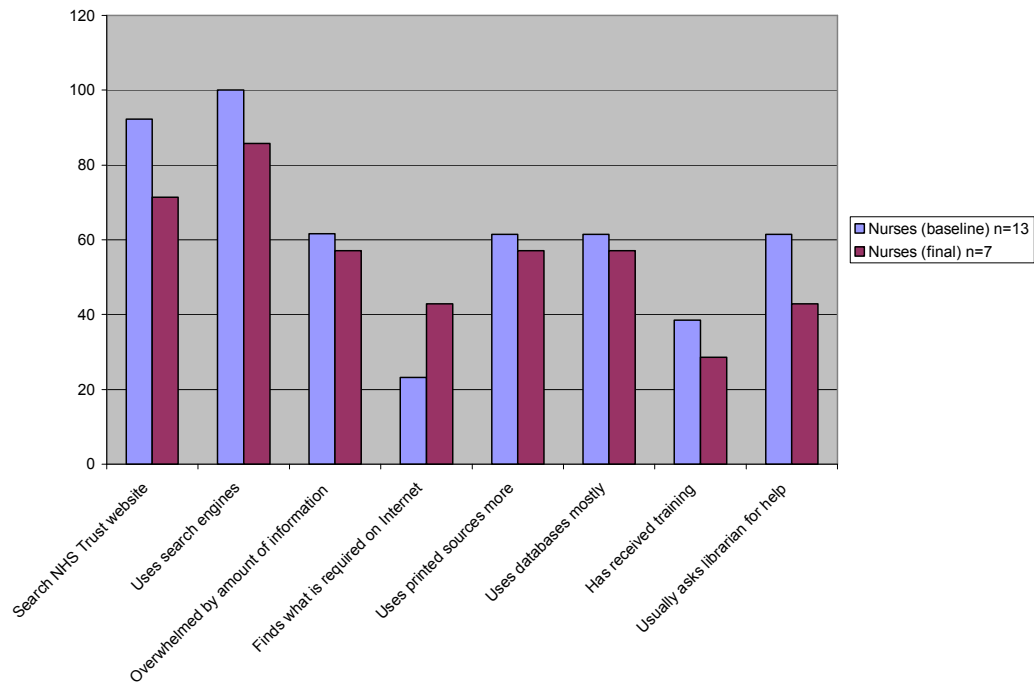


Figure 14 Baseline and final attitudes of nurses towards searching

### 3.2.6 Attitudes of allied health professionals towards searching for information (final)

The group of therapists (n=5, baseline and final) is too small to make valid comparisons. Figure 15 indicates training may have had an effect on allied health staff's willingness to use NHS/library websites, and critical use of the Internet but there are some unexpected findings (less use of databases, for example).

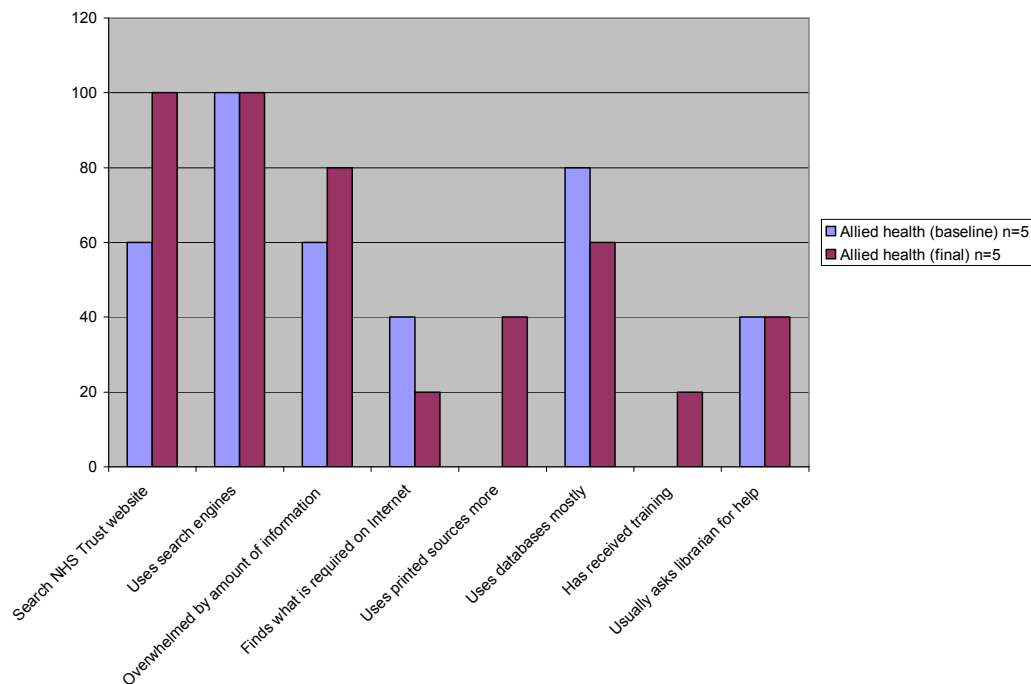


Figure 15 Baseline and final attitudes of allied health staff towards searching



Of the remaining staff, the final survey indicated that all regularly used search engines, and most obtained what they wanted on the Internet, which ties in with their minimal use of databases.

### **3.2.7 Control comparison doctors (final phase)**

Of the 61 doctors in the control comparison group, 65.6% used NHS websites, and almost all (93.4%) used search engines such as Google and Yahoo. Just under half (47.5%) felt overwhelmed by the amount of information they retrieved in searches, and fewer (32.8%) always found what they wanted on the Internet. Nearly two thirds (63.9%) regularly found the electronic information they required from databases such as MEDLINE. They perceived that they used electronic sources more than printed sources, with only 32.8% claiming that they used printed sources more than Internet-based resources. Over a quarter (27.9%) had received library skills training and 72.1% usually asked for help with searching.

### **3.2.8 Control comparison nurses (final phase)**

Of the 23 nurses in the control comparison group, 78.3% used the NHS Trust websites and almost all (91.3%) used search engines such as Google or Yahoo. Just over half (56.5%) felt overwhelmed by the amount of information they retrieved in searches, fewer (34.8%) always found what they wanted on the Internet. Over three quarters (78.3%) regularly found the electronic information they required from databases such as MEDLINE. Unlike the doctors, 65.2% used printed resources more than Internet-based resources. A higher proportion (52.2%) had received library skills training than the doctors, but around the same proportion (73.9%) usually asked a librarian for help.

### **3.2.9 Control comparison therapists (final phase)**

Of the 20 allied health professionals in the control comparison group, 85% used NHS Trust websites and almost all (90.0%) used search engines such as Google or Yahoo. Just over half (60.0%) felt overwhelmed by the amount of information they retrieved in searches, fewer (40.0%) always found what they wanted on the Internet. Three quarters (75.0%) regularly found the electronic information they required from databases such as MEDLINE. Unlike the doctors, 60.0% used printed resources more than Internet-based resources. A higher proportion (40.0%) had received library skills training than the doctors, but around the same proportion (75.0%) usually asked a librarian for help.

### **3.2.10 Baseline team attitudes towards searching**

The majority of team members used the Internet and were familiar with search engines, although the majority of all team members did not always find what they wanted on the Internet (Table 3). The percentages have been calculated on the possible responses: some respondents did not answer every question, and hence the percentages for the yes/no responses will not add up to 100%. The very different sizes of teams make comparisons difficult, but the teams can be categorised into the following groups:

Independent, confident and assured

(can search Internet and Trust website, not apparently overwhelmed by amount of information found, but aware of the limitations, have not received training, and do not ask for help – because they do not perceive the need?)

Independent, contradictory views on confidence

(can search Internet and Trust website, but tend to be overwhelmed by information although satisfied by results of searching, aware of the need for help)

Dependent

(less experience of Internet searching, greater dependence on print sources, may or may not have received training, don't ask for help)

With this categorisation:

Teams that are independent, confident and assured: Urology, Lung, Nutrition

Teams that are independent but with contradictory views on confidence: ICU

Teams that are dependent: CAP (Clinical Assessment Partnership), Psychiatry

Attitudes towards searching	Average n=69 (Urology n=4, Lung n=7, Nutrition n=6, ICU n=11 CAP n=9 Psychiatry n=32) %	Teams above the average by five or more percentage points	Teams below the average by five or more percentage points
Use Internet	89.9	Urology, Lung, Nutrition, ICU	Psychiatry
Don't use Internet	10.1		
Search NHS Trust website	59.4	Urology, Lung	CAP, Nutrition, ICU
Don't search NHS Trust website	31.9		
Uses search engines	87.0	Urology, Lung, Nutrition, ICU	CAP, Psychiatry
Doesn't use search engines	10.1		
Overwhelmed by amount of information	60.9	ICU	Urology, CAP, Nutrition
Not overwhelmed by amount	30.4		
Always finds what is required on Internet	17.4	CAP, ICU	Urology, Lung
Does not find what is required	75.4		
Uses printed sources more	49.3	CAP, Psychiatry	
Uses printed sources less	39.1		
Uses databases mostly	53.6	Nutrition	CAP, Urology
Does not use databases mostly	39.1		
Has received training	14.5	CAP	Urology
Has not received training	81.2		
Usually ask Librarian for help	43.5	Nutrition, ICU	CAP, Urology, Lung
Don't usually ask Librarian for help	52.2		

*Table 3 Baseline attitudes of teams towards searching*

### 3.2.11 Final team attitudes towards searching

Attitudes of the teams in the final phase have been analysed in similar way, to assess whether there are changes in attitudes and behaviour between the baseline and the final phase, and whether some team categorisations have altered (Table 4). Overall, the Teams search the NHS Trust website more than they did, they use search engines more, and they are more concerned about information overload. An increased percentage think that they can always find what is required on the Internet, but the balance between preferences for print and electronic resources remains the same, as does the reliance on databases. An increased percentage has received training, but the percentage that usually ask for library help remains the same.

Looking at the attitudes of the various teams individually, the effect of having Clinical Librarian support might be expected to differ according to the baseline category. If the presence of the Clinical Librarian is to support clinical governance, then it might be hypothesised that:

Independent teams (Urology, Lung, Nutrition) should continue to be independent, but may show interest in using other databases, or reassessing their skills

Teams that had contradictory views on confidence (ICU) might show more awareness of the limitations of the Internet, and feel less overwhelmed by information overload.

Teams that were dependent (CAP, Psychiatry) might show more evidence of searching skills and confidence, and might have gained more training. They might also be at an intermediate stage, with contradictory views on confidence.

The Urology team (Figure 18) is more difficult to analyse as the size of team was small (n=4 for the baseline), but the results indicate that the team is still independent, and seems to have shifted from reliance on the Internet to more use of databases, although that is accompanied by a feeling of being more overwhelmed by the amount of information retrieved. The Lung team (Figure 19) show few changes, apart from the shift in willingness to ask for library help, and a shift towards more use of printed sources, and greater use of Library websites. A different set of respondents at baseline and final stages could account for the rather paradoxical findings. The Nutrition team, on the other hand, ask for library help less than they did at baseline, but they have received more skills training and make more use of the library websites (Figure 20).

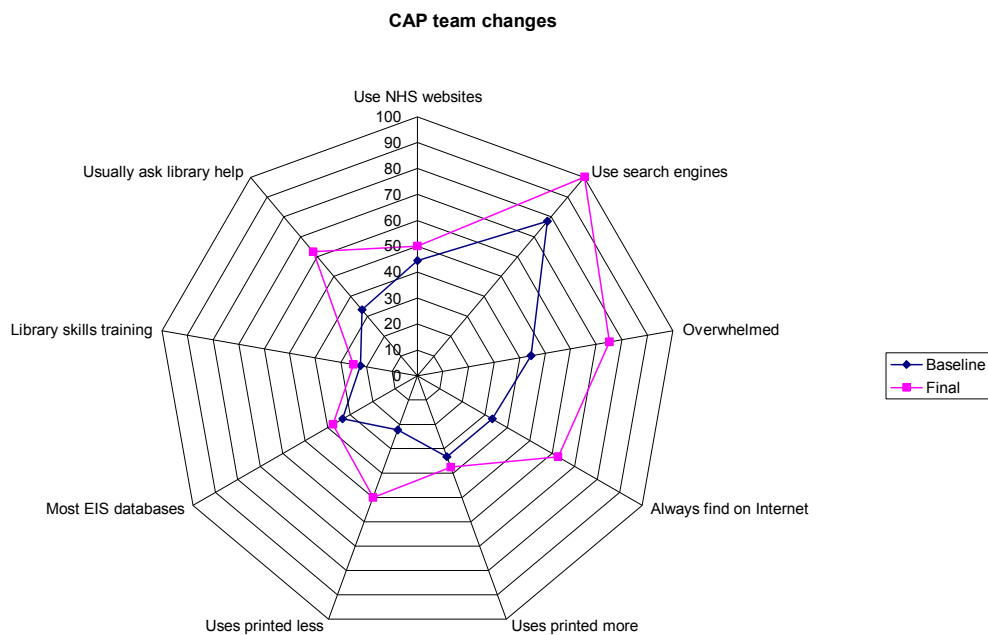
The ICU team (Figure 21) still feels overwhelmed, but is making more use of specialised databases, and library websites, reflecting, perhaps the greater percentage with library skills training. There is little change in the percentage of the team 'always finding what is required on the Internet'.

The findings show that the CAP team (Figure 16) is at an intermediate stage. They ask for more help, but at the same time rely on the Internet, although they feel more overwhelmed by the amount of information retrieved. The Psychiatry team (Figure 17) is little changed. More staff report receiving library skills training, and there is more Internet searching and a little more use of databases.

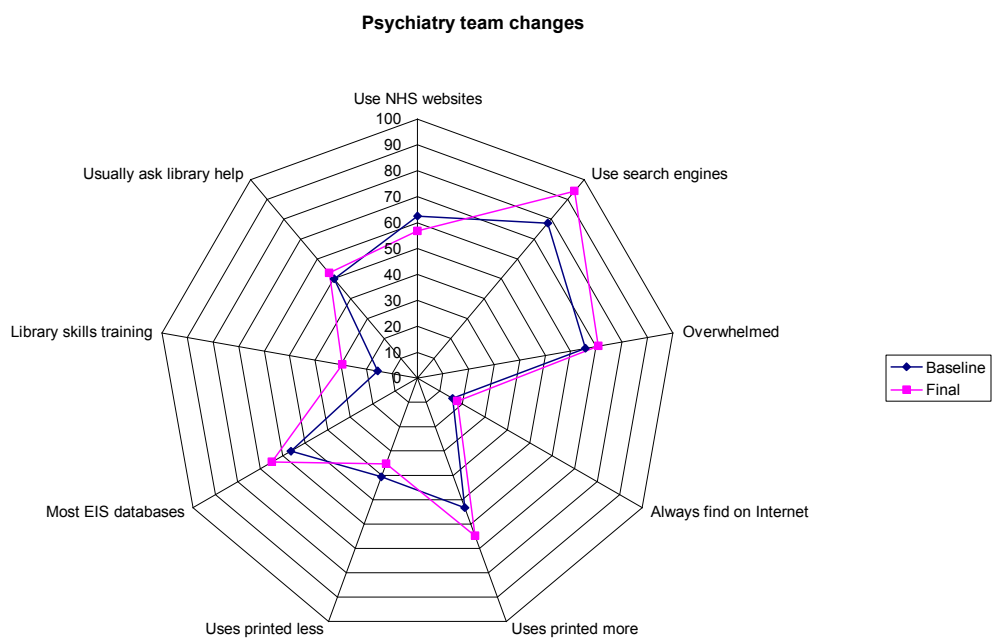
Section 3.3.5 discusses the interview data and these also confirm that the CAP team value support in searching. Nutrition and Psychiatry teams also tend to spend the most time searching for information related to patient care.

Attitudes towards searching	Average n=57 (Urology n=7, Lung n=9, Nutrition n=6, ICU n=10 CAP n=8 Psychiatry n=17) %	Teams above the average by five or more percentage points	Teams below the average by five or more percentage points
Use Internet	<i>Not asked</i>		
Don't use Internet	<i>Not asked</i>		
Search NHS Trust website	70.2	Lung, Nutrition, ICU	CAP, Psychiatry, Urology
Don't search NHS Trust website	28.1		
Uses search engines	93.0	CAP, Nutrition, ICU	Urology
Doesn't use search engines	7.0		
Overwhelmed by amount of information	68.4	Nutrition, ICU	CAP, Urology, Lung
Not overwhelmed by amount	28.1		
Always finds what is required on Internet	29.8	ICU	CAP, Psychiatry, Lung
Does not find what is required	70.2		
Uses printed sources more	52.6	Psychiatry, Urology, Lung	CAP, Nutrition, ICU
Uses printed sources less	40.4		
Uses databases mostly	57.9	Psychiatry, Nutrition, ICU	CAP, Urology, Lung
Does not use databases mostly	35.1		
Has received training	26.3	Nutrition, ICU	CAP, Urology, Lung
Has not received training	73.7		
Usually ask Librarian for help	45.6	CAP, Psychiatry	Nutrition
Don't usually ask Librarian for help	45.6		

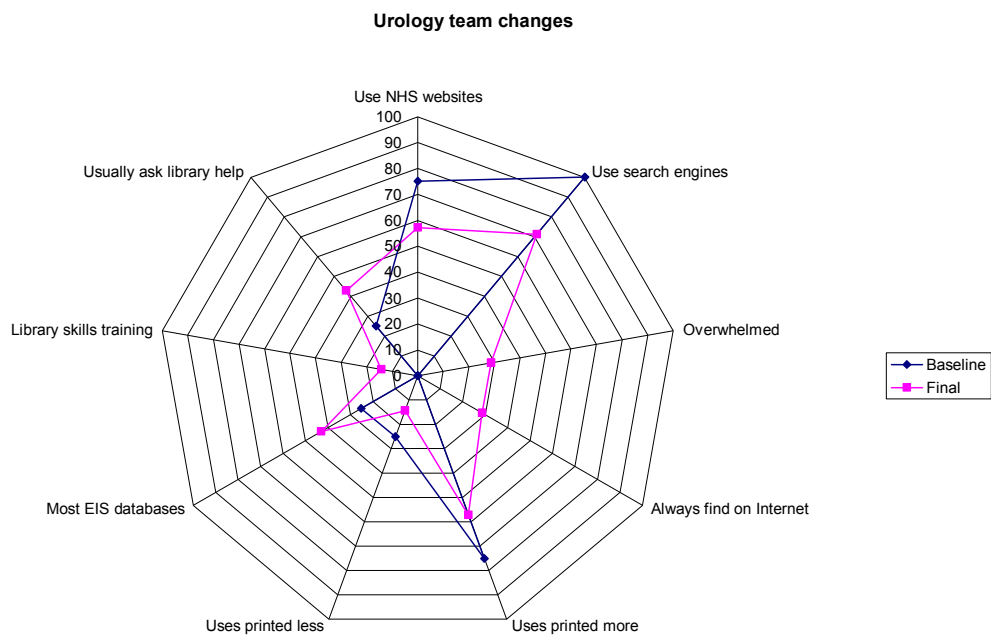
*Table 4 Final attitudes of teams towards searching*



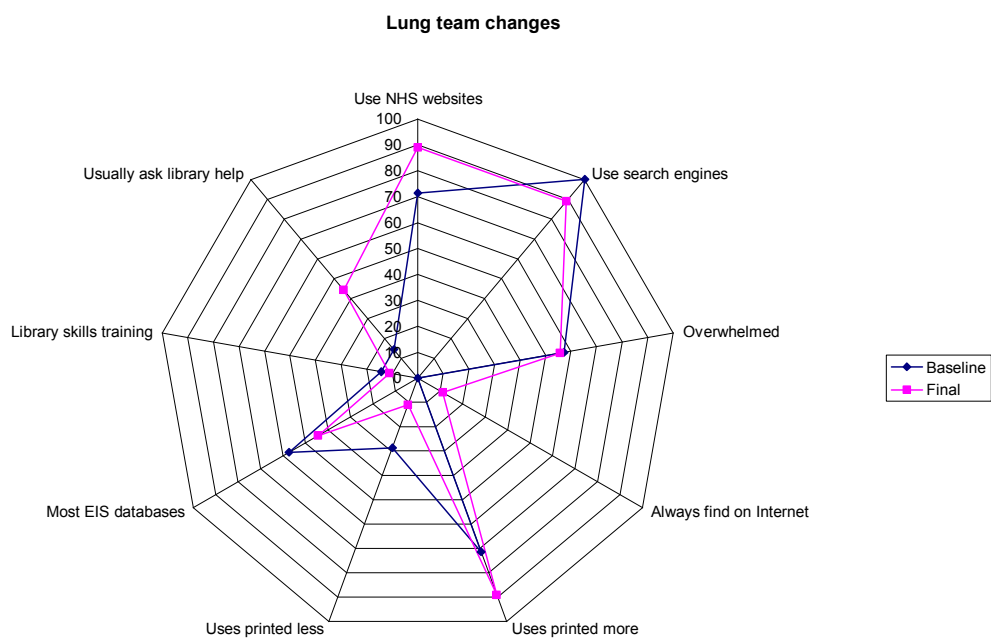
*Figure 16 Changes in CAP team*



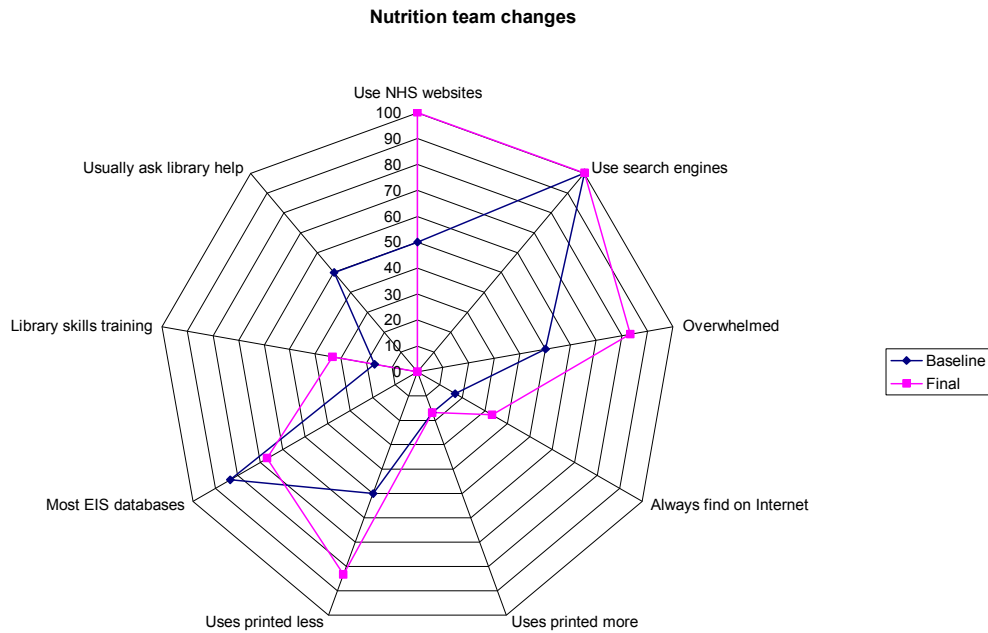
*Figure 17 Changes in Psychiatry team*



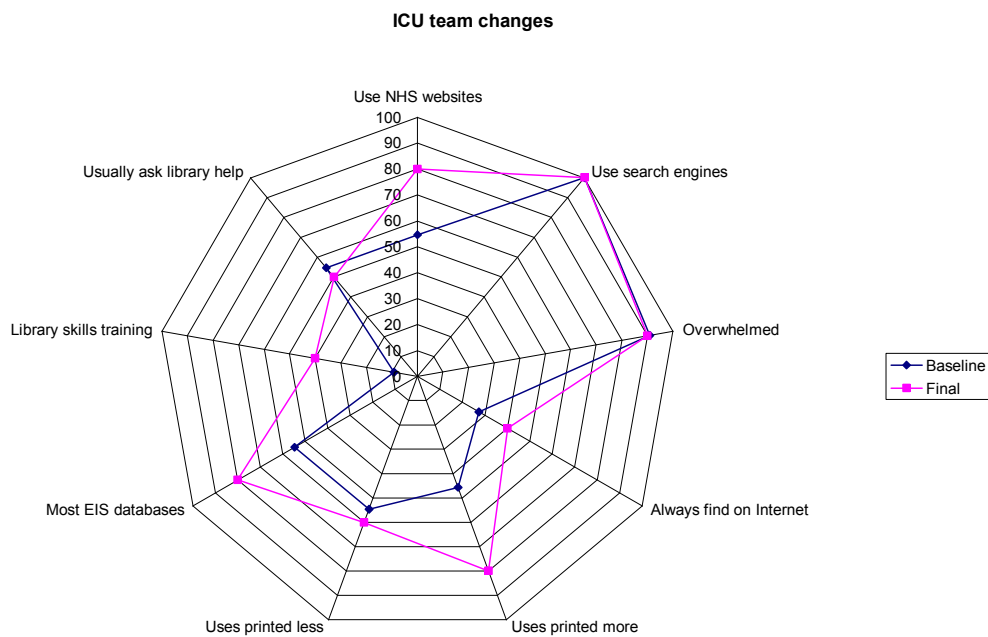
*Figure 18 Changes in Urology team*



*Figure 19 Changes in Lung team*



*Figure 20 Changes in Nutrition team*



*Figure 21 Changes in ICU team*

### 3.2.12 Changes in team attitudes towards searching

The changes between the baseline and final attitudes overall (Figure 22) indicate that the main changes effected by the presence of the clinical librarian on team was increased library skills training, greater use of databases such as MEDLINE, and increased confidence in Internet searching (and results obtained). Figure 22 indicates some

changes in perceived skills level for Internet searching. Fewer rate their skills at beginner level, all have some experience, and more rate their skills as advanced. The results for the individual teams illustrate that the overall picture obscures large differences among the individual teams.

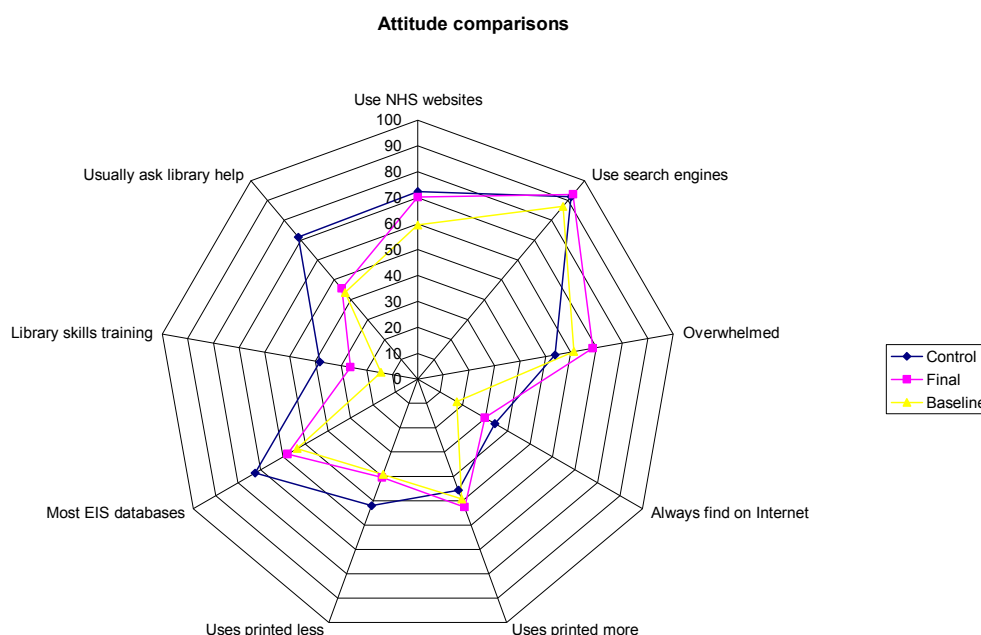


Figure 22 Attitude comparisons among baseline, final and control groups

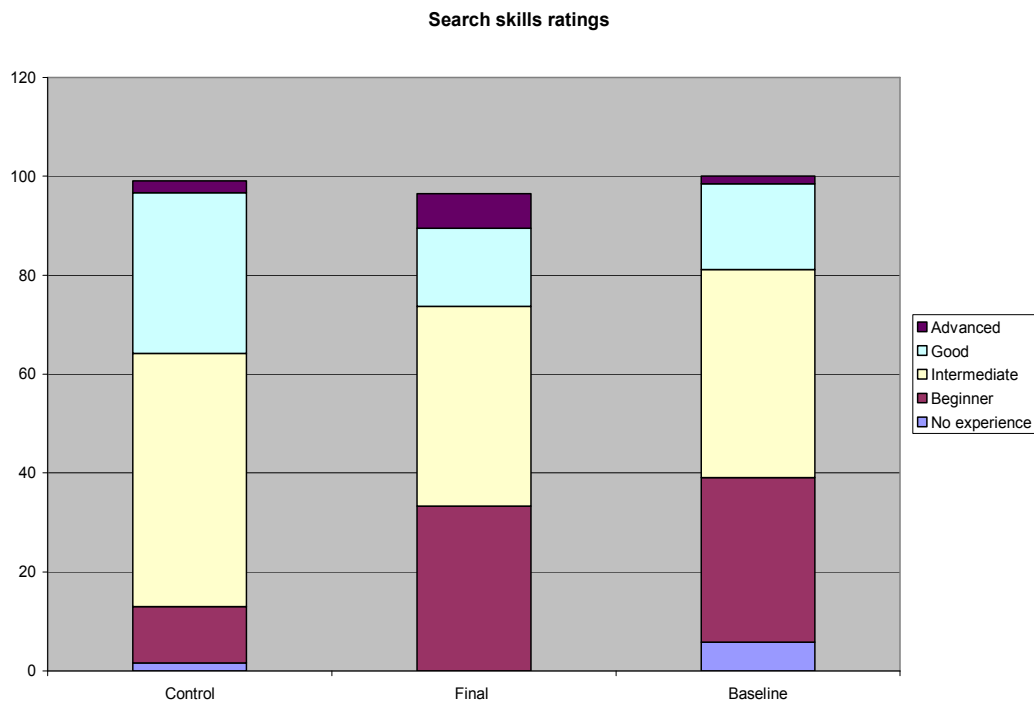
### 3.2.13 Changes in professional attitudes towards searching between baseline and final phase

There are some changes in attitudes towards searching and use of electronic resources between the baseline and final surveys. If the intention is to increase discrimination in the use of the Internet, increase use of specialised resources and increase the proportion of those with skills training, the greatest changes have occurred among the doctors. The other staff groups are small and the conditions imposed on the survey by the LREC make it impossible to know whether the baseline respondents are the same as the final respondents. The Clinical Librarian's time was focused on the medical members of some teams, and some teams were composed entirely of doctors. There are some effects on changed attitudes towards searching the more specialised databases. The findings for the nursing group are negative, and for the allied health staff mixed, but the numbers are too small to make valid judgements. The qualitative data (Section 3.5.7, 3.5.8, 3.6.4) explain the impact in a more positive way.

### 3.2.14 Comparisons between control group and those receiving the clinical librarian service

The control group responses may be biased towards those who already use library services, or who have received training. If that is the case, then it is not surprising that the control group are likely to obtain the electronic information they need from databases such as MEDLINE and to make effective use of library/NHS websites (Figure 22). That supposition is supported by the perceptions of their skill levels at searching the Internet (Figure 23). The modal value for the control group is 'intermediate' level, with relatively few rating their skills at beginner level. If the control group responses are biased in the way suggested, then the clinical librarian is having an impact on the infrequent library users.





*Figure 23 Comparison of search skills ratings*

### 3.2.15 Implications for clinical librarian support of searching for the evidence

The quantitative evidence indicates that having clinical librarian support for a team:

- encourages staff to search for information to support clinical decisions (thus decreasing risks to patient care of unsafe decisions)
- improves search skills among all staff groups, with the greatest effect (at this stage) among the doctors
- changes team attitudes and cultures towards searching for the evidence – a more discriminating approach emerging as the norm.

## 3.3 Willingness to pay in terms of time spent searching

### 3.3.1 Doctors' attitudes to time spent searching (baseline)

Doctors were unwilling to spend a long time searching for information, and most searches were expected to last fewer than ten minutes. If the search was of personal interest, more doctors were prepared to spend a longer time searching (Figure 24)

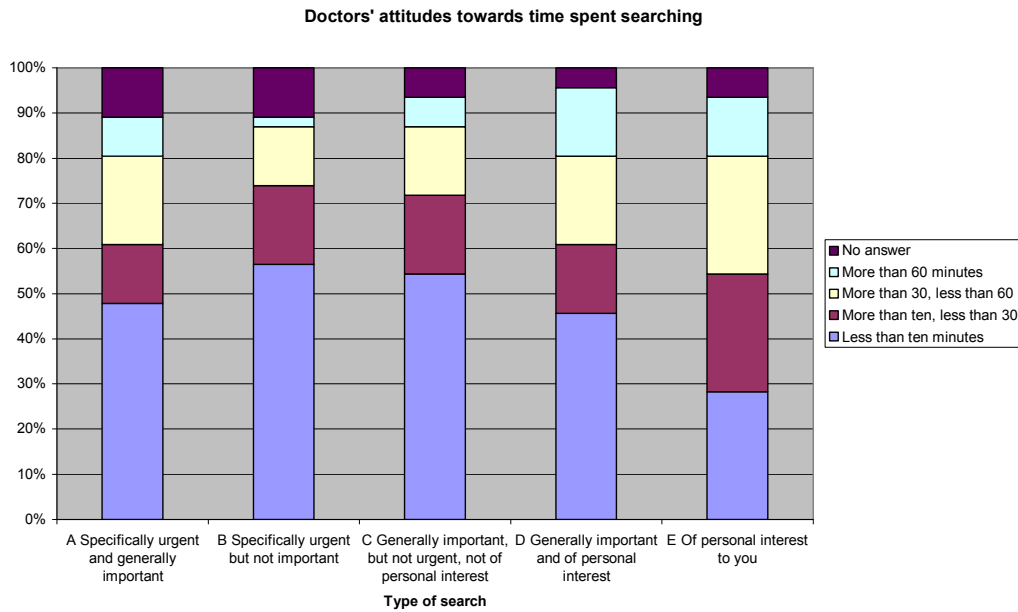


Figure 24 Doctors' attitudes towards time spent searching (baseline)

### 3.3.2 Nursing and other non-medical attitudes to time spent searching (baseline)

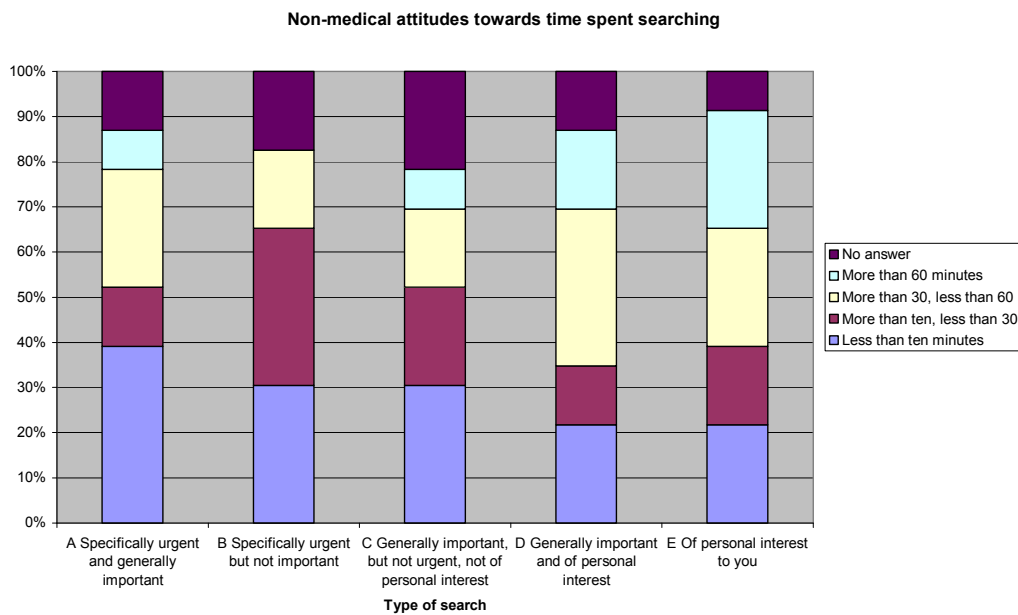


Figure 25 Non-medical staff attitudes towards time spent searching(baseline)

The results for nurses and other non-medical staff have been combined as the number of responses was relatively limited, and the patterns were very similar. Compared to the doctors' attitudes, the non-medical staff generally expected to spend longer on a search, particularly those searches which were generally important and of personal interest. Like the doctors, there was little motivation to continue with specific and urgent queries that were not important for patient care in general.

### 3.3.3 Doctors' attitudes to time spent searching (final)

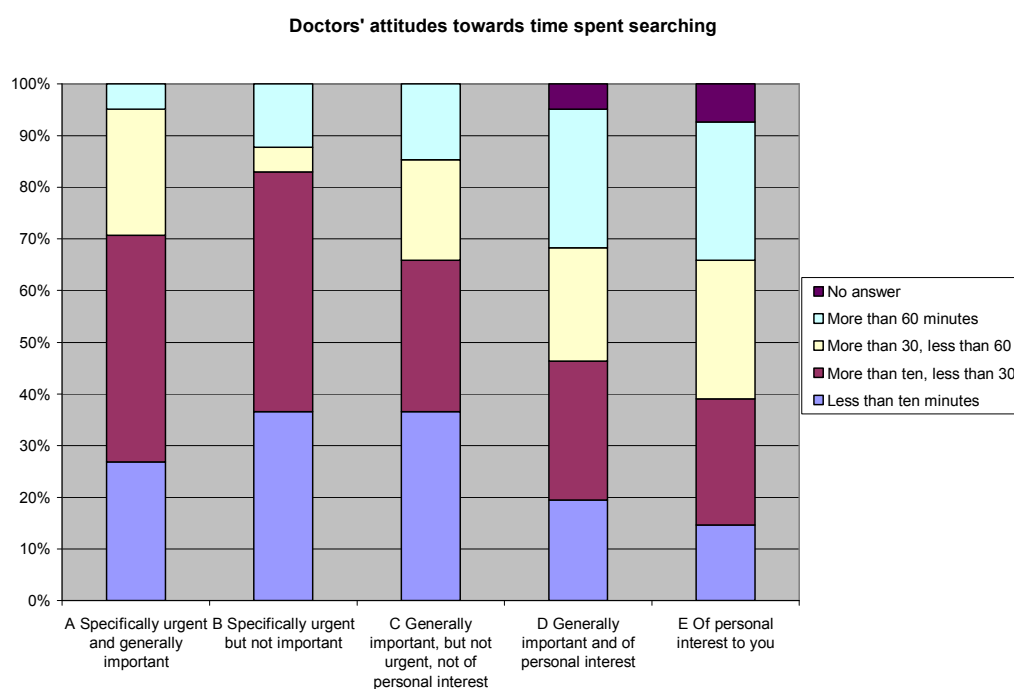


Figure 26 Doctors' attitudes towards time spent searching (final)

### 3.3.4 Nursing and other non-medical attitudes to time spent searching (final)

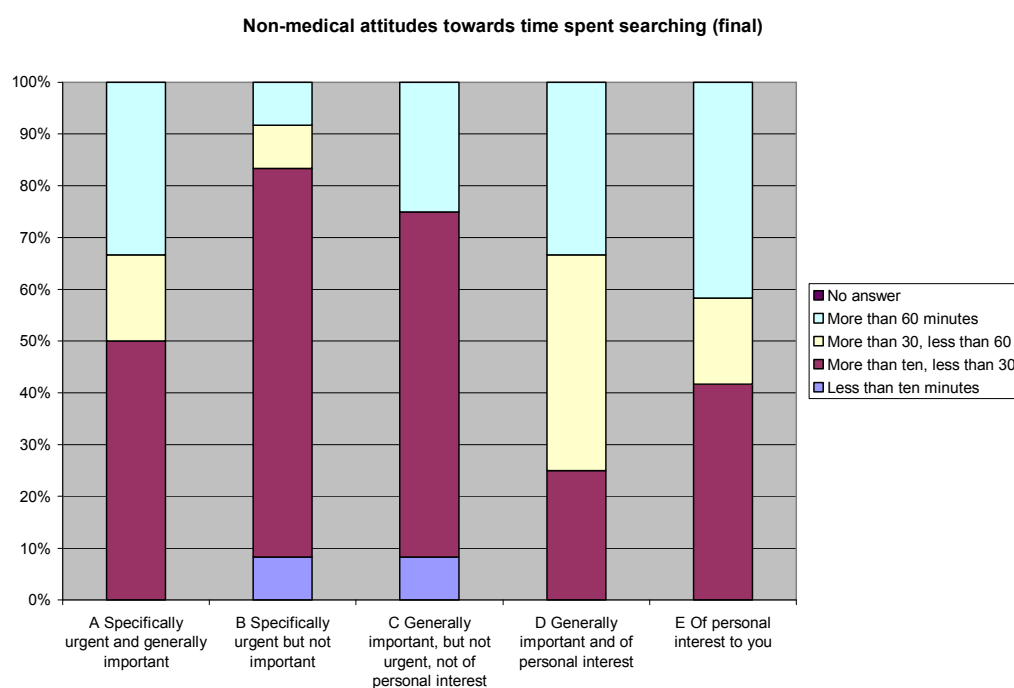


Figure 27 Non-medical staff attitudes towards time searching (final)

As the staff groups for nurses (n=7) and therapists and allied health staff (n=5) for the final questionnaire are small, the results have been combined, as for the baseline questionnaire. The patterns of the two groups were very similar.

### 3.3.5 Professional attitudes towards time spent searching

The initial hurdles to effective searching can be considerable to those who have not had any experience in using the databases.

*'Just really on, in terms of how to ensure greater specificity and greater sensitivity, so in other words I'm more able to discount that which is irrelevant and more able to pull in that which is relevant. But as I say it's really that some of the mechanical stuff, just how to..... the intricacies of searching. To me it's far from switching on the computer and it being obvious, it's not the search or the databases and so on. You need prior knowledge in order to know how to go about it properly I think. It won't be obvious from the site itself.'* (social worker)

The interviewees were asked if they generally found the information that they needed. The majority (52%) replied that 'yes' they generally found what they needed and five (15%) said that they did not. Some interviewees did not commit themselves to give a definite answer.

Interviewees were asked how much time they had spent the previous week searching for information that was specifically urgent for the care of a patient (Table 5).

Time spent last week searching for urgent information (specific to a patient)							Total average hours
	Consultants	Doctors	Nurses	PAM	Other	TOTAL	
Up to 30mins				1		1	0.25
30mins - 1 hr	1	1		1		3	2.25
1 - 2 hrs	1	3		1		5	7.5
2 - 3 hrs			4			4	10
3 - 4 hrs							0
4 - 5 hrs							0
More than 5 hrs			1			1	10
<b>Total hrs searching</b>	<b>2.25</b>	<b>5.25</b>	<b>20</b>	<b>2.5</b>			<b>30</b>
None/can't say	4	4			2	10	

Table 5 Time spent by professionals searching for specific, urgent queries

A total of 30 hours were spent searching for urgent information specific to a patient in that particular week. Of the 14 staff who said they had spent time on this, the majority had searched between one and three hours. Nurses were the group that had spent the most time searching. The same information is shown in Table 6, but in relation to the different teams.

Figures 26 and 27 confirm the general pattern that nurses and allied health/PAM staff may be prepared to spend more time searching than doctors. The baseline and final comparisons are discussed in Section 3.3.10.

Time spent last week searching for urgent information (specific to a patient)							
	CAP	ICU	Lung	Nutrition	Psychiatry	Urology	Total hours searching
Up to 30mins	1						
30mins - 1 hr				1	2		
1 - 2 hrs				1	3	1	
2 - 3 hrs	1		1	2			
3 - 4 hrs							
4 - 5 hrs							
More than 5 hrs	1						
<b>Total average hrs</b>	<b>12.75</b>		<b>2.5</b>	<b>7.25</b>	<b>6</b>	<b>1.5</b>	<b>30</b>
None/can't say	1	4	1		4		

*Table 6 Time spent by teams on specific and urgent searches*

The CAP team spent the most time searching for this type of information followed by the Nutrition and Psychiatry teams.

Time spent last week searching for generally important information							
	Consultants	Doctors	Nurses	PAM	Other	TOTAL	Total average hours
Up to 30mins		1				<b>1</b>	0.25
30mins - 1 hr							0
1 - 2 hrs	1	4	2	1		<b>8</b>	12
2 - 3 hrs	1	1	2			<b>4</b>	10
3 - 4 hrs		1	1	1	1	<b>4</b>	14
4 - 5 hrs							0
5hr - 1 day							0
1 - 2 days					1	<b>1</b>	10.5
<b>Total average hrs</b>	<b>4</b>	<b>12.25</b>	<b>11.5</b>	<b>5</b>	<b>14</b>		<b>46.75</b>
None/can't say	3					<b>3</b>	

*Table 7 Time spent by professionals on generally important information*

A total of 46.75 hours was spent searching for general information in that particular week (Table 7). With two exceptions, staff confined their searching to between one and four hours. One team manager said that they spent one and a half days (10.5 hours) searching that week. Doctors spent slightly more time searching than nurses for general information in that particular week. The same information is shown in Table 8, but in relation to the different teams.

The Psychiatry team spent the most time (26 hours) searching for general information, more than three times that spent by the CAP team and nearly four times more than the Nutrition team (Table 8).

Interviewees were asked how much time they had spent the previous week searching for information that was of personal interest to them (e.g. in relation to coursework, CPD or research) (Table 9). The CAP team spent the most time searching for information of personal interest which was work related, followed by the Psychiatry team.

See Section 3.7 for the time/cost savings estimates that use the data in these Tables.

Time spent last week searching for generally important information							
	CAP	ICU	Lung	Nutrition	Psychiatry	Urology	Total hrs searching
Up to 30mins		1					
30mins - 1 hr							
1 - 2 hrs	1	1		2	4		
2 - 3 hrs	1		1		1	1	
3 - 4 hrs	1			1	2		
4 - 5 hrs							
5hr - 1 day							
1 - 2 days					1		
<b>Total average hrs</b>	<b>7.5</b>	<b>1.75</b>	<b>2.5</b>	<b>6.5</b>	<b>26</b>	<b>2.5</b>	<b>46.75</b>
None/can't say		2			1		

Table 8 Time spent searching for generally important information by teams.

Time spent last week searching for information of personal interest (work-related)							
	Consultants	Doctors	Nurses	PAM	Other	TOTAL	Total average hrs
Up to 30mins		1				<b>1</b>	0.25
30mins - 1 hr	1					<b>1</b>	0.75
1 - 2 hrs		2	2		1	<b>5</b>	7.5
2 - 3 hrs			3			<b>3</b>	7.5
3 - 4 hrs	1	1			1	<b>3</b>	10.5
4 - 5 hrs				1		<b>1</b>	4.5
<b>Total average hrs</b>	<b>4.25</b>	<b>6.75</b>	<b>10.5</b>	<b>4.5</b>	<b>5</b>		<b>31</b>
None/can't say	2	1	1	2		<b>6</b>	

Table 9 Time spent by professionals on searches of personal interest

Again this information was readjusted to reflect how much time the individual teams spent searching (Table 10).

Time spent last week searching for information of personal interest (work-related)							
	CAP	ICU	Lung	Nutrition	Psychiatry	Urology	Total hrs searching
Up to 30mins		1					
30mins - 1 hr		1					
1 - 2 hrs	1	1	1	1	1		
2 - 3 hrs	2			1			
3 - 4 hrs					2	1	
4 - 5 hrs	1						
<b>Total average hrs</b>	<b>11</b>	<b>2.5</b>	<b>1.5</b>	<b>4</b>	<b>8.5</b>	<b>3.5</b>	<b>31</b>
None/can't say		1	1	1	2	1	

Table 10 Time spent by teams on searches of personal interest

### 3.3.6 Information behaviour of professional groups (baseline and final comparisons)

Fifteen of those interviewed (45%) in the teams stated that their searching skills had improved since using the services of the clinical librarian. (This is bearing in mind that the Training group is not included in these figures.) The clinical librarian had provided searching skills training to these groups in the course of her activities with them, such as individual assistance with seminar presentations and group sessions in the journal clubs.

*'Very much, and because we did it here within the department, everybody felt comfortable.'* (CAP - nurse)

*'Yes, my searching skills have dramatically improved! Drastically improved I would say!'* (ICU - SHO)

*'Well yeah, I mean obviously I mean I have asked Jean to guide me really on how to use CINAHL and obviously other methods really on the computer when I do go to the library. And I mean at first and obviously being a nurse, I wasn't very good at literature searches but yeah she has guided me quite a lot really.'* (Nutrition - nurse)

*'Yes, she has done a session with how to go around the different databases. It has helped, yes.'* (Psychiatry - junior doctor)

*'Yeah, I think so. Well at today's presentation, there were some things that I actually brought to our attention which I hadn't previously been aware of doing it that way.'* (Psychiatry - consultant)

Eight interviewees (24%) commented that they did not feel any more confident in using their searching skills than before their contact with the clinical librarian. In part this was due to the fact that they could now rely on her to do their searching.

*'No, I wouldn't have thought so because I was OK with using them up to a point. It was slow but I was OK with using them before but being able to utilise her saves us having to do doesn't it?'* (CAP - OT)

*'Well I've always been confident at data searching, it's just the time aspect.'* (Nutrition - consultant)

*'Probably not, no, because I haven't actually taken up that facility of, you know, sitting and being shown the best way of doing it.'* (Lung - nurse)

*'No, because I'm still not familiar with how to use them myself. I mean I'm happy in the library itself but I'm not very confident with things like OVID, the online search engine and things.'* (Nutrition Support Team)

A third of the interviewees reported that they could access more accurate information quicker than before. One commented that the clinical librarian had assisted in the breadth of information to be found.

*'Yes, because they (referring to the CAP team) can do the search. They've been shown how to search and go through and keywords and yes, very much.'* (CAP - nurse)

*'I should hope so. I can't say that I've definitely put it into practice recently because these are ongoing and I just coordinate the meeting. But yes, I'd like to think so yes.'* (ICU - consultant)

*'I don't know about speed but I think the breadth of information. I think she'd help with the breadth of information.'* (Psychiatry - consultant)

### 3.3.7 Information needs of professional groups (final and control comparisons)

For the control group, most of the information needs were associated with continuing professional education (%). A higher proportion of the control group respondents were actively involved in CPD or research than the teams with clinical librarian input, where patient care was the main information need.

	Control n=123 %	Final team n=57 %
Education	37.1	30.1
Patient care	27.0	33.7
Research	22.6	15.7
Audit	9.0	12.5
Other (including missing responses)	3.3	8.0

Table 11 Control and final information needs profiles

### 3.3.8 Site variations among control groups

There were some variations in attitudes towards searching among the control group sites (Figure 28). These cannot be attributed wholly to differences in the composition of the groups at the sites, as the proportion of medical and nursing staff are very similar (Table 11). A higher proportion of the Wrexham respondents had received library skills training, and (unsurprisingly) a higher proportion of the Wrexham respondents obtained most of their electronic information from databases such as MEDLINE.

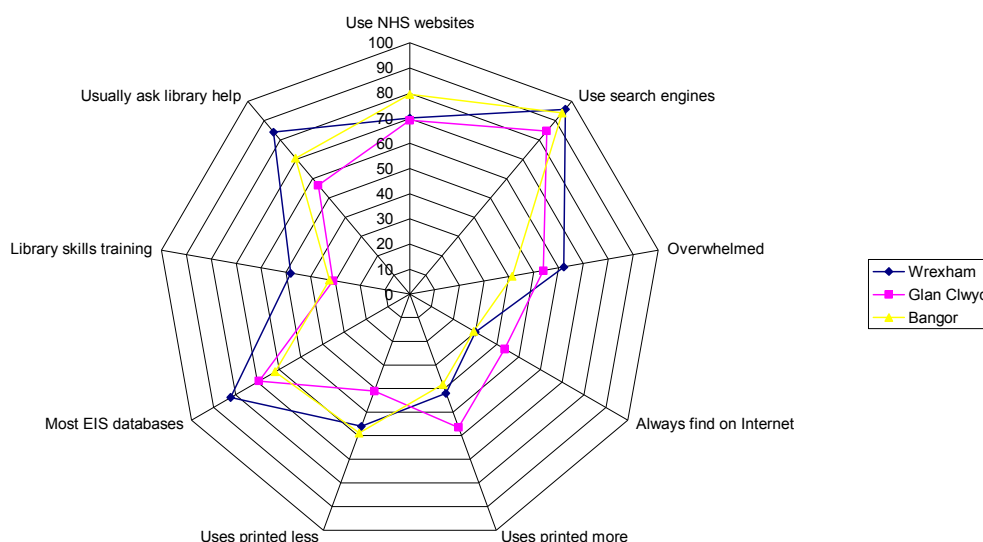


Figure 28 Comparisons among control group sites



### 3.3.10 Changes in attitudes towards time spent searching between baseline and final phase

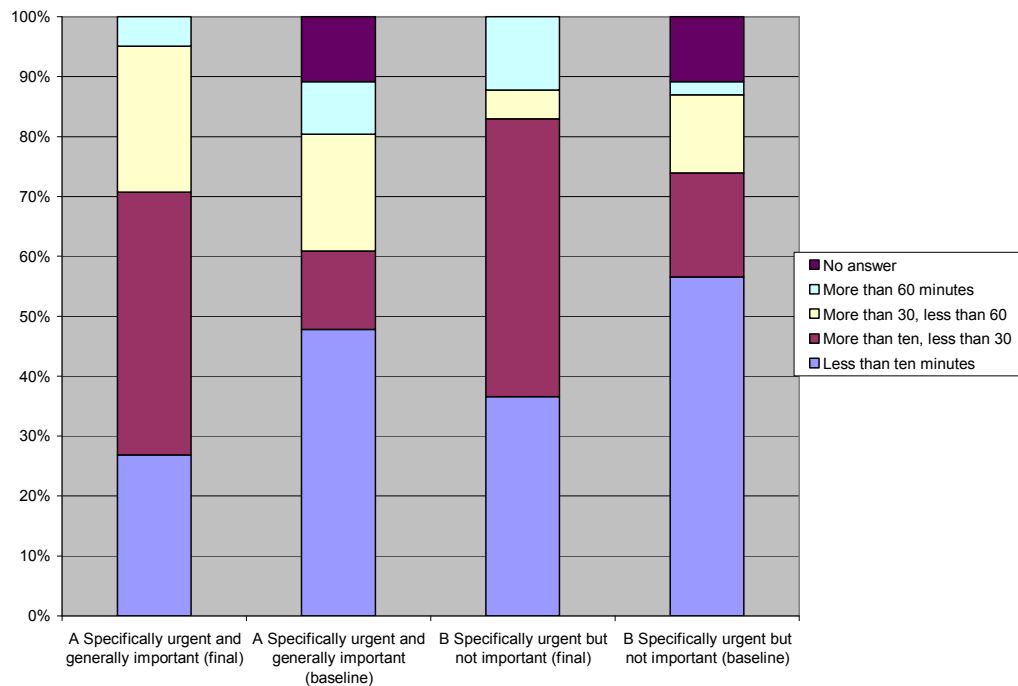
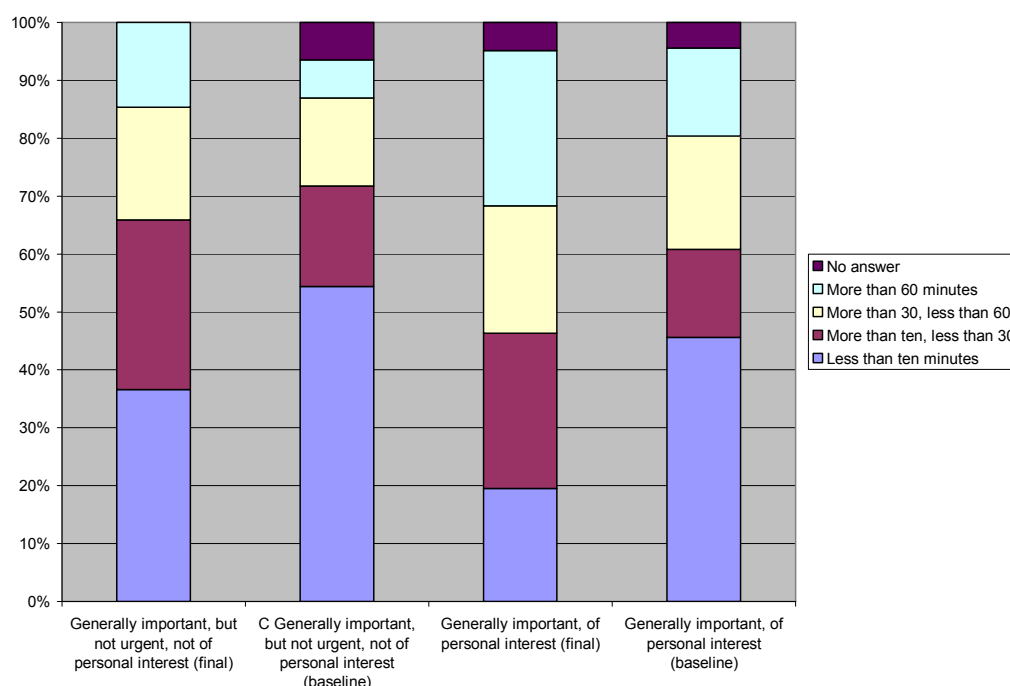
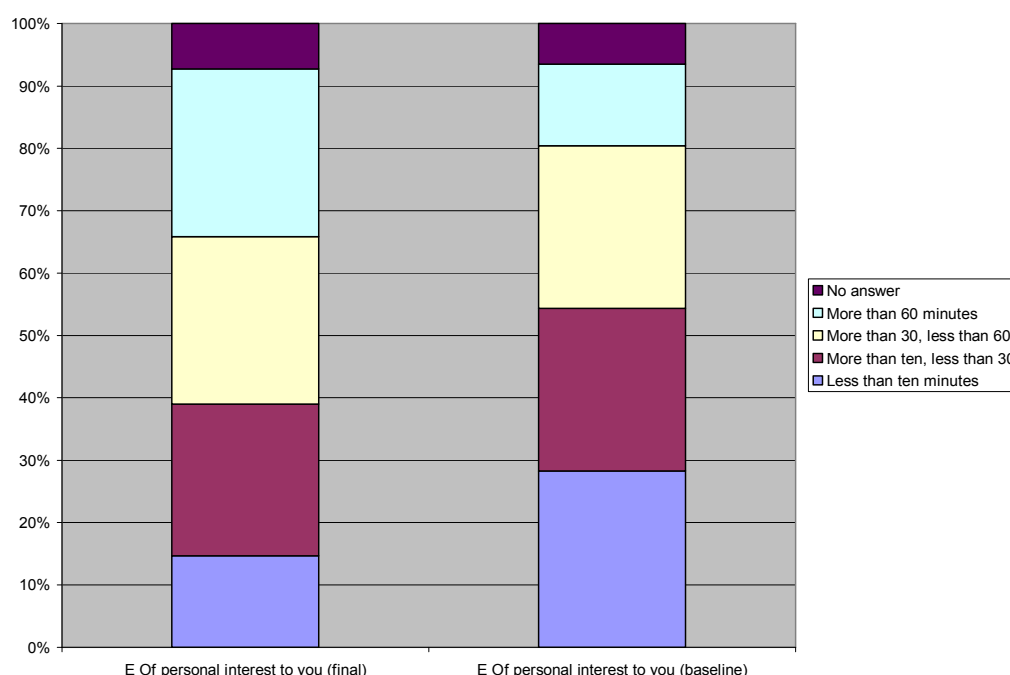


Figure 29 Comparison of time spent by doctors on specific patient care queries

Figure 29 indicates that after introduction of the clinical librarian service doctors are prepared to spend more time searching for specific, urgent queries concerning patient care. That difference is maintained for queries that are generally important for patient care, but are not urgent and not of personal interest. There is also a difference in the searching patterns between baseline and final phase for searches that are generally important and of personal interest (Figures 30 and 31). However, the inference that searching behaviour for queries of personal interest have not been affected by the introduction of the clinical librarian service is contradicted by the findings in Figure 31 concerning queries of personal interest (only), which seems to indicate again that the doctors are prepared to spend more time searching for queries now, compared to the baseline stage. The shift is consistently upward.



*Figure 30 Comparison of time spent by doctors on generally important patient care queries*



*Figure 31 Comparison of time spent by doctors on queries of personal interest*

For the nursing and therapists, allied health group (nurses n=7, allied health n=5 the pattern is similar (Figure 32). Nurses and therapists in the final phase were more willing to spend time searching for information for specific information for patient care, particularly if the need is generally important for the care of other patients as well. For queries that are generally important for patient care, a similar pattern emerges (Figure 33). There has, like the doctors' searching pattern, been a shift in willingness to spend

more time searching for information that is of personal interest to them, and of general interest. For information that is of personal interest (only) to them this group are willing to spend more time searching, and their expectations are that they might spend longer than they did in the baseline survey (Figure 34).

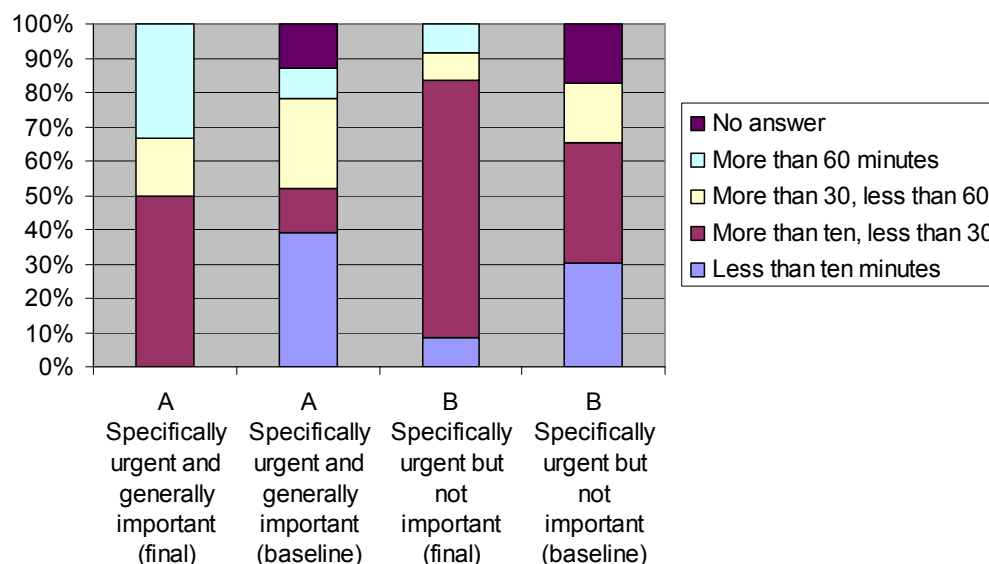


Figure 32 Comparison of time spent by non-medical staff on specific patient queries

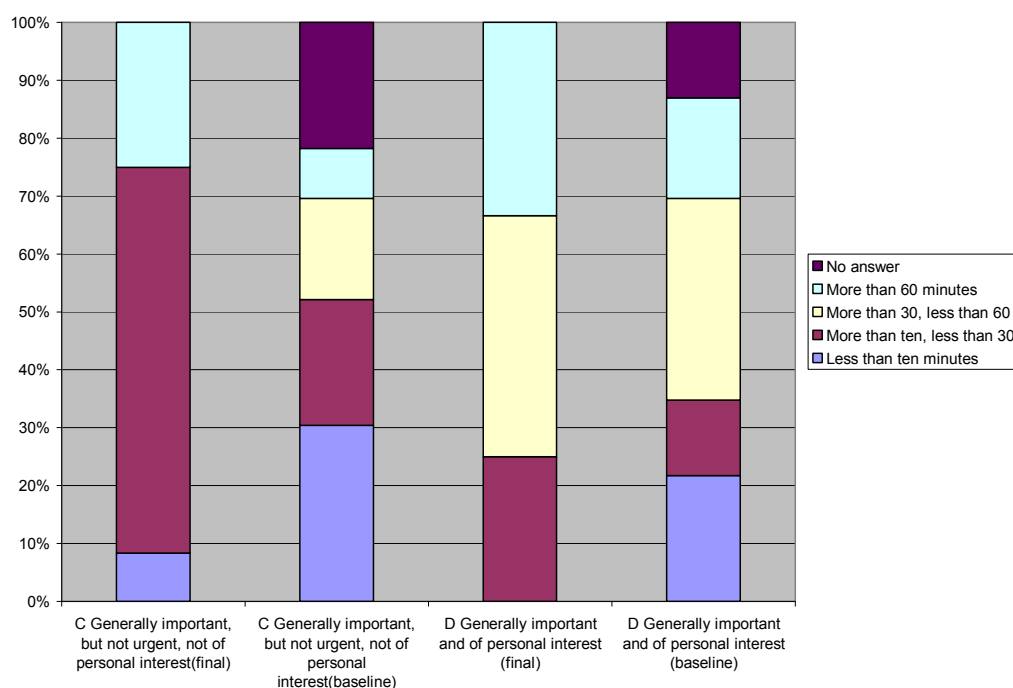


Figure 33 Comparison of time spent by non-medical staff on generally important patient queries

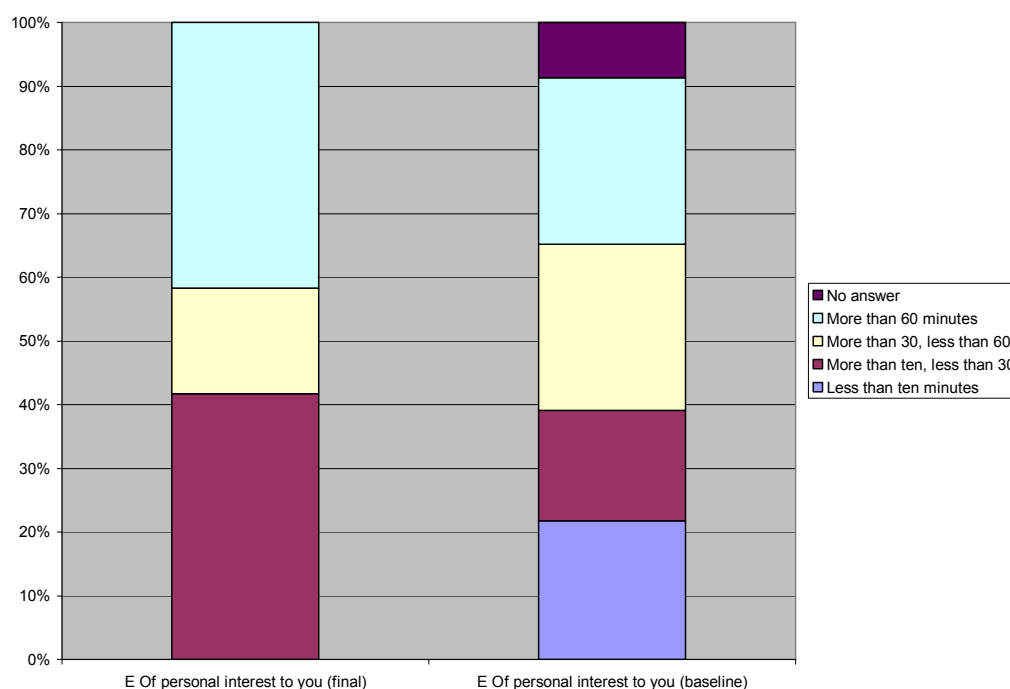


Figure 34 Comparison of time spent by non-medical staff on queries of personal interest

### 3.3.12 Estimating time saved by the clinical librarian

Comments on the feedback forms returned to the Clinical Librarian after search results had been conveyed to a requester indicated that the search had saved a lot of time. Of the 34 forms analysed, six (17.6%) noted in open ended comments that the search had 'saved me a lot of time'.

Interviewees were asked how much time they would spend per week searching for information themselves (as an alternative to using the services of the clinical librarian). Their responses produced the following results.

NWCL EVALUATION PROJECT							
Time spent per week searching for information							
	Consultants	Doctors	Nurses	PAM	Other	TOTAL	Total average hours
Up to 30mins	1					1	0.25
30mins - 1 hr		1				1	0.75
1 - 2 hrs		1	1	1		3	4.5
2 - 3 hrs	1			1	1	3	7.5
3 - 4 hrs	1	1	1	1		4	14
4 - 5 hrs		1					4.5
5 - 6 hrs				1		1	5.5
<b>Total average hrs</b>	<b>6.25</b>	<b>10.25</b>	<b>5</b>	<b>13</b>	<b>2.5</b>		<b>37</b>
None	1					1	
Don't know	1					1	

Table 12 Time spent searching by health professionals

If the time mentioned is averaged and totalled, a total figure of 37 hours per week spent searching emerges. The therapist/PAM staff reported to spend the most time searching, followed by the doctors and the consultants. The previous sections indicated that the presence of the clinical librarian in the team produced a more positive attitude towards searching for information and evidence to support clinical decisions. However, the above table indicates that the clinical librarian should save staff time, particularly if the longer searches are delegated.

### 3.3.13 Estimation of costs and benefits of the clinical librarian service (time saving)

Interviews (Section 3.5.9) indicated that for some staff there was no alternative to the clinical librarian service. The clinical librarian had saved them time and made their working lives less stressful.

The interviewees were asked how much time did they think that the clinical librarian saved them when they were conducting a particular search (Table 13). The previous section (3.3.12) indicated that there might be more benefit to the NHS if the clinical librarian saved time searching on the longer searches, and this opinion is shared by the interviewees. By delegating the search to the clinical librarian, staff time is saved overall if the clinical librarian is more efficient in searching.

Time saved by clinical librarian when conducting a particular search							Total average hours
	Consultants	Doctors	Nurses	PAM	Other	TOTAL	
Up to 30mins							0
30mins - 1 hr	1					1	0.75
1 - 2 hrs	1	2	1			4	6
2 - 3 hrs	1	2	2			5	12.5
3 - 4 hrs		1	2	2		5	17.5
4 - 5 hrs				1		1	4.5
5hr - 1 day	2	1		1	2	6	36
2 days or more			1			1	14
<b>Total time saved</b>	<b>16.75</b>	<b>17.5</b>	<b>27.5</b>	<b>17.5</b>	<b>12</b>		<b>91.25</b>
<b>Average</b>	<b>3.4</b>	<b>2.9</b>	<b>4.6</b>	<b>4.4</b>	<b>6</b>		
Other (estimation not possible)		1		1		2	

Table 13 Estimates of time saved on searching

Seven of the interviewees thought that the clinical librarian saved them more than five hours searching on a particular search and five of these commented that it would have taken them at least a day's work.

*'Oh hours. It must have been, for the information that Jean brought back to us I don't know how long it would have taken her but I know it would have taken me an awful lot of hours to do that. Just to do the search and then follow up and check out the articles and photocopy them and do a synopsis, an overview of the research, I can't say how many hours it would be, quite a long time. It would be a significant piece of work for me and I'd be looking at a day's work probably.'* (Team manager)

*'Oh it would have saved me at least, well I mean, two hours to look it up and then filling in the cards to request the articles which would probably take another twenty minutes, half an hour, then waiting for the articles to arrive. Then discarding the ones that probably weren't necessarily relevant, so that easily it saved me a day of paperwork'. (Consultant)*

The 'other' respondents also commented that the clinical librarian had saved them time but could not give a figure.

*'Double the time. It would have taken me twice as long'. (ICU - SHO)*

### 3.3.14 Changes in number of literature searches requested

The trend towards more searching (see also Figure 3) is reflected in the estimates of interviewees. Two thirds of the interviewees said that they were requesting more literature searches as a result of the clinical librarian services being available. This applied to the whole of the Nutrition team, and the majority of the CAP, ICU and Psychiatry teams.

Of the four who commented that they were not requesting any extra searches, two were from the Psychiatry team, and the others from ICU and Lung teams.

*'Probably not at the moment because I think we're still working along that line. We've got into the pattern of doing it as a department so we have a meeting every two weeks so we request a paper for that meeting, on a topic. But we probably aren't individually increasing our requests, I think probably because we don't know whether we can or not.'* (ICU - consultant)

The interviewees were asked to give an approximation of the extra number of requests made per week. Some gave a figure per month and others could not give a figure at all. The impact on inter-library loan requests (Appendix 9) suggests that there will be an increase in demand for documents, despite the greater access to e-journals freely available.

<b>NWCL EVALUATION PROJECT</b>						
<b><i>Extra searches requested per week</i></b>						
	Consultants	Doctors	Nurses	PAM	Other	Total average searches
1 or 2	1					<b>1.5</b>
2 or 3			2			<b>5</b>
3 or 4	1		1		1	<b>10.5</b>
<b>Total average searches</b>	<b>5</b>		<b>8.5</b>		<b>3.5</b>	<b>17</b>
<b><i>Extra searches requested per month</i></b>						
1 or 2						
2 or 3	1			1		<b>5</b>
3 or 4						
4 or 5				1		<b>4.5</b>
<b>Total average searches</b>	<b>2.5</b>			<b>7</b>		<b>9.5</b>
Request more/can't say	1	1	1	1	1	
No extra searches	1	2	1			

*Table 14 Extra searches requested by different professional groups*

If the total number of searches from the two tables are combined, it could be estimated that 77.5 extra search requests per month (or 19.4 per week) have been made since the

clinical librarian services have been available. The results indicate that nurses are requesting the most extra literature searches. The breakdown of the extra literature search requests by team is as follows:

<b>Extra searches requested per week per team</b>							
	CAP	ICU	Lung	Nutrition	Psychiatry	Urology	<b>Total</b>
1 or 2					1		
2 or 3	1			1			
3 or 4	1			1	1		
<b>Total average searches</b>	<b>6</b>			<b>6</b>	<b>5</b>		<b>17</b>
<b>Extra searches requested per month per team (estimate)</b>							
	CAP	ICU	Lung	Nutrition	Psychiatry	Urology	
1 or 2							
2 or 3		1		1			
3 or 4							
4 or 5				1			
5 or 6							
<b>Total average searches</b>		<b>2.5</b>		<b>7</b>			<b>9.5</b>
<b>Actual (Fig. 3)</b>	<b>2.8</b>	<b>0.3</b>	<b>1.0</b>	<b>4.0</b>	<b>4.6</b>	<b>1.6</b>	
Request more/can't say	2				2	1	
No extra searches		1	1		2		

Table 15 Extra searches requested by different teams

Comparing this with Figure 3, indicates that their perceptions are reasonably aligned in scale with the facts for those requesting most – Psychiatry account for the most, followed by Nutrition and CAP. But clearly perceptions are not the same as reality for the workload.

### 3.3.15 Tradeoffs in searching

The results indicate that the effect of the clinical librarian service has been to:

- improve willingness of health staff to do their own searches
- improve searching effectiveness, particularly among those who were less competent previously
- confirm that the clinical librarian can save time and money for the teams, and the Trusts, particularly if the longer searches are delegated
- many of the previous needs for searches were unmet, and there will be a period of adjustment as the 'rules of engagement' on who (clinical librarian or health professional) should do which type of search among the team, and why.

## 3.4 Willingness to pay for library services

### 3.4.1 Allocation of resources by staff receiving clinical librarian service

In the final questionnaire, team respondents were asked how they would allocate up to 20 currency units among various library services, including some clinical librarian services. Of the teams, Lung, Urology and Psychiatry would allocate at least 20% of the resources to journals and bookstock, but it is interesting that two of these teams would allocate almost as much again to online journals, more than databases through HOWIS. In fact, those three teams would allocate more to document delivery and inter-library loans than they would to databases.

The other three teams have different priorities. The CAP team would allocate 20% of the resources to one-to-one information skills support, above the amount allocated to bookstock and journals, or online journals, or HOWIS databases. The CAP team in fact allocated the highest amount of any of the teams to HOWIS databases. Their allocation of resources to specific CL services indicated that such services were just starting with their team. The amount allocated to 'other' was similar to the sum of the individually specified services (2.0 compared to 2.14). The same argument appears to hold for the Urology team which allocated more than a quarter of the resources to 'other clinical librarian services'. The Nutrition team allocated most of the money to critical appraisal skills training, followed by information skills training (with the Clinical Librarian) and journal club support. Their profile was similar to the ICU team. While the ICU team allocated most of the resources to information skills training, their allocation was fairly evenly divided among all the categories.

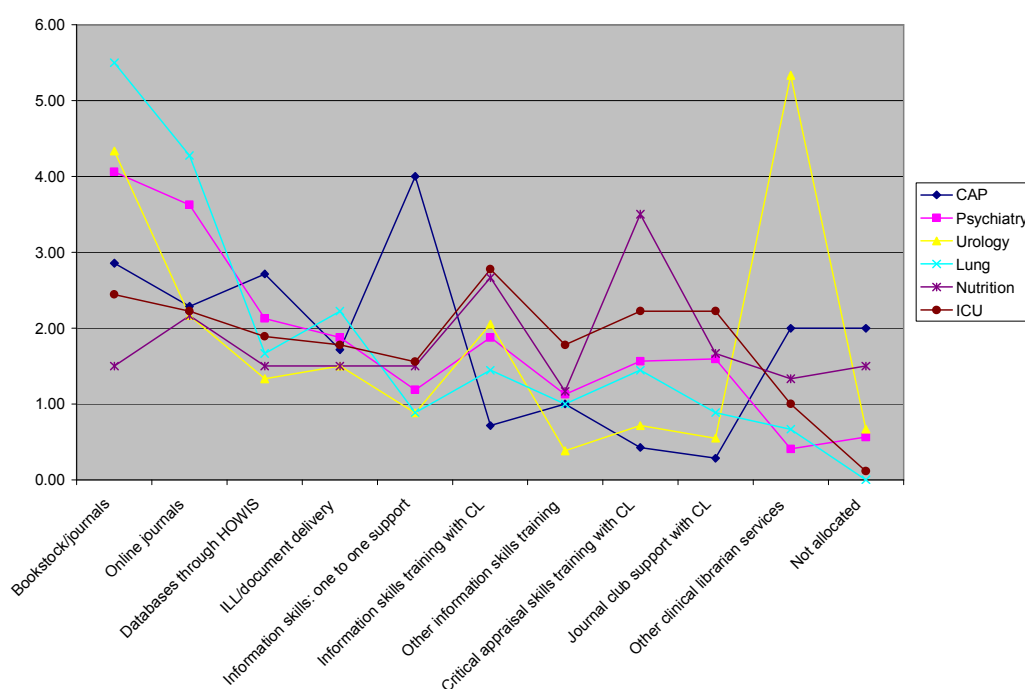


Figure 35 Allocation of library spending preferences by team

Conclusions are considered in 3.4.3 and 3.4.4.

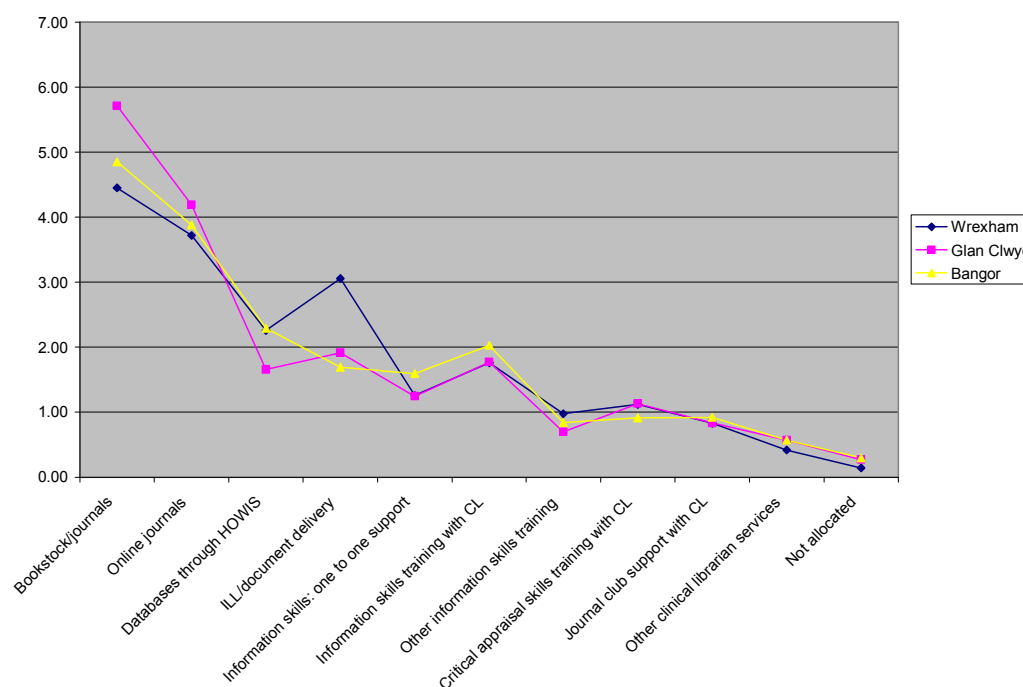


	CAP n=7	Psychiatry n=16	Urology n=6	Lung n=6	Nutrition n=6	ICU n=9	Wrexham n=50	Glan Clwyd n=37	Bangor n=34
Bookstock, journals	2.86	4.06	4.33	<b>5.50</b>	1.50	2.44	4.45	<b>5.72</b>	4.9
Online journals	2.29	3.63	2.17	<b>4.28</b>	2.17	2.22	3.72	<b>4.19</b>	3.9
Databases through HOWIS	<b>2.71</b>	2.13	1.33	1.67	1.50	1.89	<b>2.26</b>	1.66	<b>2.3</b>
ILL/document delivery	1.71	1.88	1.50	<b>2.22</b>	1.50	1.78	<b>3.06</b>	1.92	1.7
Information skills: one to one support	<b>4.00</b>	1.19	0.88	0.89	1.50	1.56	1.26	1.25	<b>1.6</b>
Information skills training with CL	0.71	1.88	2.05	1.44	<b>2.67</b>	<b>2.78</b>	1.76	1.77	2.0
Other information skills training	1.00	1.13	0.38	1.00	<b>1.17</b>	<b>1.78</b>	0.98	0.70	0.8
Critical appraisal skills training with CL	0.43	1.56	0.72	1.44	<b>3.50</b>	<b>2.22</b>	1.12	1.13	0.9
Journal club support with CL	0.29	1.59	0.55	0.89	<b>1.67</b>	<b>2.22</b>	0.83	0.83	0.9
Other clinical librarian services	<b>2.00</b>	0.41	<b>5.33</b>	0.67	1.33	1.00	0.42	0.57	0.6
Not allocated	2.00	0.56	0.67	0.00	1.50	0.11	0.14	0.27	0.3

*Table 16 Preferences for resource allocation on library services*

### 3.4.2 Allocation of resources by staff not receiving clinical librarian service

It might be expected that the control groups, who had not received the clinical librarian service, would all allocate resources in a very similar way, and Figure 36 bears this out. The one outlier is Wrexham's allocation of resources to document delivery/inter-library loans. Apart from that the pattern is similar among all three sites.



*Figure 36 Control group allocation of library resources*

Comparing the preferences of the Psychiatry team (based at Wrexham) with the views of Wrexham staff in general, the patterns are similar, but the Psychiatry team wish to

allocate more resources to particular clinical librarian services than the control group at the hospital.

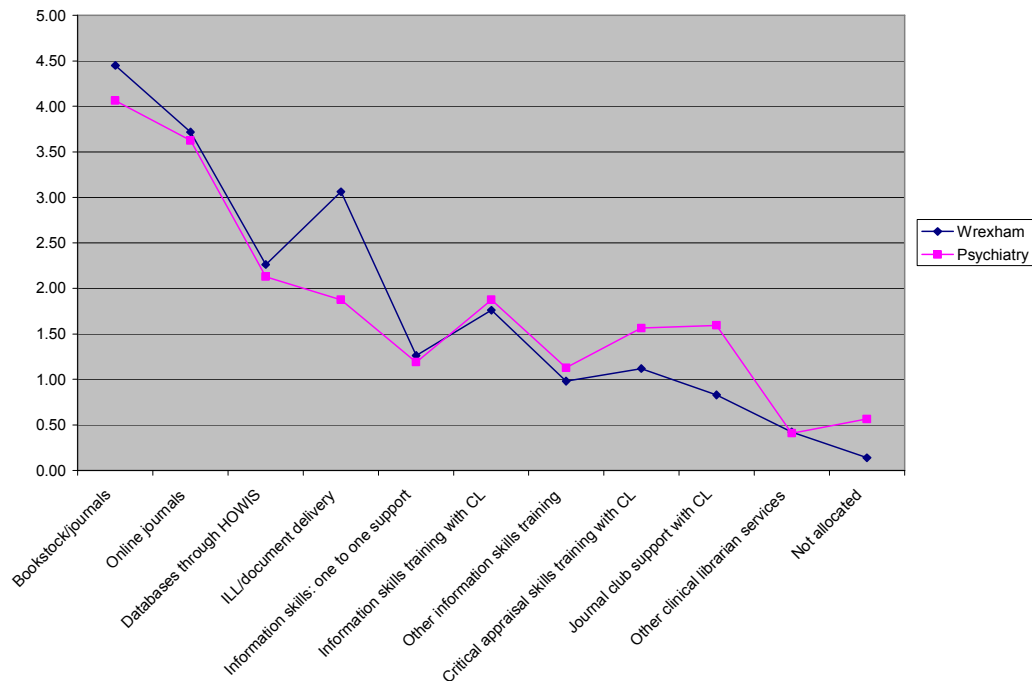


Figure 37 Wrexham comparisons

Comparing the preferences of the Lung, Urology, and ICU teams at Glan Clwyd with the control group at Glan Clwyd, the pattern is similar, with the exception of the Urology team that indicated that they wanted clinical librarian services but were unable to specify particular services. Apart from Urology (See Section 3.1.9), the pattern of preferences for increased spending on particular clinical librarian services is clear. For example:

- Urology, Nutrition and ICU value information skills training more than the control group
- ICU and Nutrition value journal club support
- ICU and Nutrition teams value critical appraisal skills training more than the control group
- CAP team wishes one-to-one information skills support (particularly, perhaps to use databases supplied through HOWIS)
- Lung team response little different from the control (see Section 3.1.8)

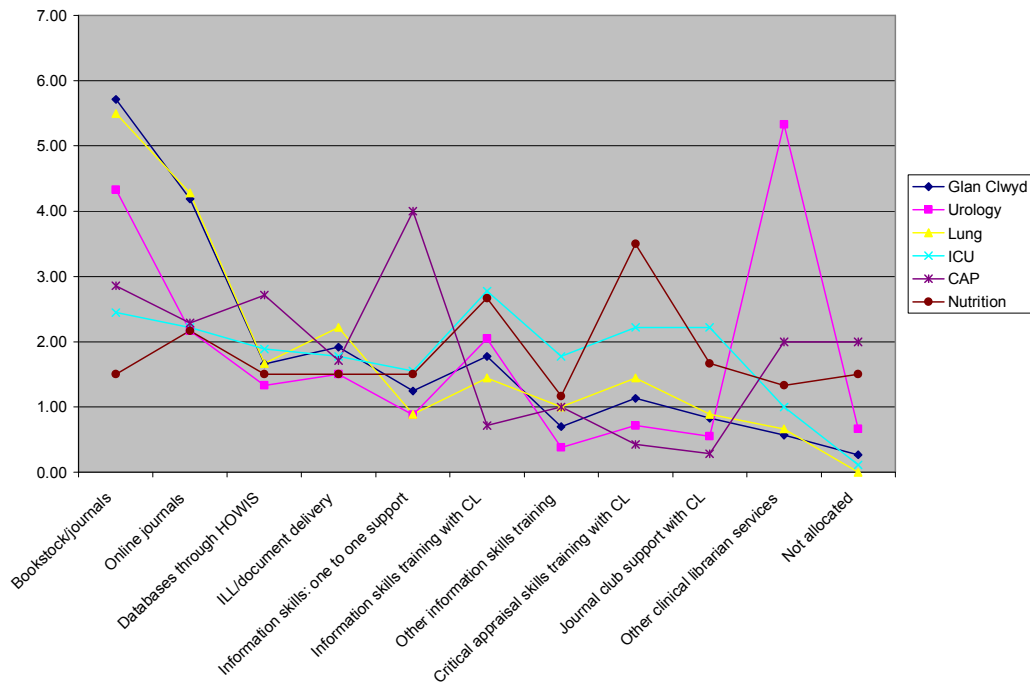


Figure 38 Glan Clwyd comparisons

### 3.4.3 Comparison of preferences for library spending: summary

For the teams where clinical librarian support was focused mainly on supporting the medical staff (Lung, Urology, ICU, Psychiatry) there is a shift towards allocating money to clinical librarian services, and away from conventional print-based services such as bookstock and journals, and possibly document delivery.

For the strongly multidisciplinary teams (CAP, Nutrition) the small numbers in the teams make comparisons difficult but the indications are that services such as critical appraisal skills training with the clinical librarian, and one-to-one support are highly valued, far more than provision of library resources.

### 3.4.4 Implications for future development of clinical librarian services

The teams receiving clinical librarian services favour a shift of library spending towards:

- More information skills training – the type depends on the needs of the team, with the newer teams favouring one-to-one support and the more established teams wishing to develop critical appraisal skills training
- Clinical librarian supported teams would spend less on bookstock and journals, but spending on electronic journals is more likely to be preserved
- Pattern of spending preferences among teams receiving clinical librarian services reflects what has worked best for those teams.

## 3.5 Impact of clinical librarian service on clinical governance

Sections 3.5.1-3.5.6 deal specifically with NW Wales, Sections 3.5.7, 3.5.8 onwards deal with NE Wales and Conwy & Denbighshire. Section 3.5.9 and 3.5.10 cover all sites.

### 3.5.1 Impact of training on searching skills among the training group (N W Wales)

Evaluation of 13 training sessions was conducted twice: 1) immediately after the session, on the day of the training; and 2) one month later. The majority of respondents (n=90) to the post-session survey had attended an 'introduction to medical information resources' (76.7%), with HOWIS sessions accounting for another 14.4%. For the majority (81.1%) this was their first library training. Others had attended training some years ago, possibly for postgraduate or undergraduate degree studies. Most (67.8%, 61/90) rated their Internet/database searching skills as Beginner level, with the remainder rating their skills as Intermediate, and only one individual rated their skills as Advanced.

The sessions were rated very highly, with almost all (99%) session respondents agreeing that the objectives were clear, and that the Clinical Librarian presented the material effectively. The expectations were clear for 72.2% of the respondents, and comments indicated that the content and balance was appropriate. Particularly helpful aspects were the practical, hands-on element, and learning how to search effectively and efficiently. The sessions left 88.9% of the respondents more confident, and an equal percentage had had their expectations of the course met. The main demand was for more follow-up sessions, with hands-on practice.

The response to the evaluation one month later was much lower (n=24). Around two thirds of these respondents (62.5%, 15/24) believed their searching skills were at Beginner level, but over half (54.2%) believed their skills had improved, mostly as they were more confident in searching techniques, and had been shown how to search efficiently and effectively. Those that had searched during the month after the training cited a variety of resources used, included (in descending order of frequency), Google, MEDLINE, Ask Jeeves/Yahoo, and a variety of specific journal sites, or databases.

### 3.5.2 Reasons why training has affected searching skills and time spent searching

Twelve telephone interviews were conducted with individuals who had attended training sessions with the clinical librarian in Gwynedd or had used her services within the community. Of those interviewed seven had attended medical resources information skills training, three critical appraisal training and two had used the clinical librarian service within the context of journal clubs. The group consisted of two males and ten females of whom four were physiotherapists, three nursing sisters, two nurses, one occupational therapist, one GP and one community team leader.

The interviewees were asked how they would assess their skills after receiving training. Three assessed themselves as beginners, six as being at intermediate level and one as advanced.

*'Advanced, but I was already fairly advanced beforehand but it certainly helped me and I would definitely say I was advanced now.'* (Community team leader)

And one commented that she had been assisted by being trained in Boolean searching techniques.

*'I didn't think I was too bad to be truthful. At least then we were shown how to put a search word in with an 'and' this and an 'and' that.'* (Nurse)

One of the training group who had received critical appraisal training and had been able to apply his newly acquired skills commented:

*'Yeah. I try to read the professional journals. We have a professional journal in Physio and I probably, I'm a little bit more balanced in the way that I look at an article now. And also if I am looking for something specific, then I'm better at picking which are good quality and which are more dubious.'* (Physiotherapist)

Interviewees were asked if they had performed an online search since receiving training. Eight (two thirds) reported that they had carried out online searches using, for example, Medline, HOWIS or CINHAL. The remaining four had not performed searches at work

and two reported that they did not have internet access at work. Of these four, two had used the internet at home to find work-related information, one using Google and the other directly accessing a particular website. One commented that she had been busy doing ECDL training and had not had time for searching.

Two thirds (8) of the interviewees reported that their speed in finding required published information had increased and seven commented that they usually found the information they needed.

*'Yeah, that did help to be more systematic, so yes.'* (Physiotherapist)

*'I'm a bit better now. Still I'm filtering through quite a few things. I mean on odd occasions there are about two thousand different papers. So I could filter more effectively now to get to the core of my pile.'* (Physiotherapist)

The interviewees were asked how much time they spent searching per week after receiving training.

Three stated that they spent more time searching. One spent less than two hours more per week, another two hours more and the third eight hours more per week.

*'I do spend more time searching. Previously I used to do one search and then perhaps I wouldn't be able to get what I wanted so I had to go to my librarian.'* (Physiotherapist)

Four reported that they spent less time searching but only one could quantify it in terms of hours (under two hours less).

Two commented that they spent about the same time per week searching but that they probably looked for more information than before.

*'That would be difficult to say. I probably think it would be about the same because I do more but I don't have to spend as much time to do it. .... For an individual topic, it probably takes me a lot less time, but I probably look for more topics!'* (Physiotherapist)

*'Oh a difficult one, I don't know really. I'd have to think about that. Because although you might spend more time searching, you might just be widening the net a bit mightn't you, so it's a difficult one really. I'm not sure.'* (Sister)

The main reasons why a few interviewees had not carried out searches since the training sessions were pressure of work or lack of access to the internet.

Finally the interviewees were asked if they would like further training (and in which particular areas).

Only one said she didn't want further training and eleven suggested that they would like to have it.

### **3.5.3 Reasons why training has not affected searching skills**

Respondents to the evaluation one month after training noted some problems. Of the eight respondents (33.3%) who reported that their skills had not improved after training, the reasons included time constraints, and lack of access to the necessary hardware to practise. In fact, more than half (58.3%) reported that they had not conducted an online search since the training session. Only 12.5% reported that the number of literature searches they conducted had increased after training. Time spent searching was more likely to be less, but not substantially so – under two hours, on average.

Although 29.17% of the respondents claimed they were more confident in finding library resources, against none who were less confident and 4.2% who are 'about the same', the number who reported that they were more likely to browse for current developments and research information was much smaller. Three reported they would do more of this, none would do less, and six reported no change.

Unsurprisingly, more respondents perceived the need for more training (58.3%) than those did not want further training (29.2%).

Nine of the interviewees reported that their searching skills had improved since training but the other three admitted that they hadn't had the chance to use their newly acquired searching skills yet.

*'Yes, I would say yes..... I think that part of an essential aspect of the learning process is the repetition and being involved with the process of finding the evidence and then using the evidence. So we're using different databases to find the literature that we're looking for.'* (Occupational Therapist)

*'Um, that's difficult because I don't suppose they have very much. Although I was taught how to do it but, due to time constraints, you know, you have to apply yourself to these new skills and I really haven't because of time restraints and the new contract and stuff. I probably have improved a little bit but not greatly, although I was given the right information.'* (General Practitioner)

#### **3.5.4 Impact of training on clinical practice**

Information found during the searches conducted after training was often found in good time (37.5% mentioned this) and 25% of the respondents mentioned sharing the information with colleagues. A variety of impacts related to patient care were mentioned including:

- Share with patient (16.7%)
- Contribute to therapy (16.7%)
- Improve patient management (20.8%)
- Contribute to presentation (20.8%)

Two of the interviewees said that they used the information they had found in preparation for an interview. One searched for information on leadership and the other on multidisciplinary working. Both were successful in getting their jobs.

Three-quarters of the training group reported that they shared the information they had found with colleagues.

*'More with my colleagues really. At the day hostel here we doing a falls programme. So it was more that I shared with my colleagues I think.'* (Physiotherapist)

*'Yes, we shared in a sense. I have two juniors under my supervision so while generally teaching them about stroke, so I could tell them my point that these patients should be treated on a stroke unit.'* (Physiotherapist)

None of the training group interviewed said that they shared their information with patients.

Four interviewees commented that their search information contributed to therapy. And three quarters of those who had carried out searches said that their information had contributed (or will contribute) to patient management.

*'Well it's strong evidence that these patients will improve further in an organised stroke unit which is the kind of argument I'm putting forward to the local trust, so I*

*cannot only produce paper evidence but also practical evidence as well. So through that way it was quite useful.'* (Physiotherapist)

*'Well I think broadly speaking, I think eventually yes because it's part of a structured course of teaching I'm assessing. So it's going to improve your skills so that means you're going to be able to educate patients better, so yes.'* (Sister)

One of the training group who was searching for information on clinical supervision on behalf of someone else said that it would contribute towards a publication.

The majority commented that the information contributed towards CPD.

### 3.5.5 Reasons why formal training has affected clinical practice and confidence

The majority of the interviewees who had carried out an online search found the information in good time.

*'Well I had about a week. I used a lot of things like Nursing Standard and the RCN sites.'* (Sister)

*'Yes, straight away. The next day the one I chose, I got a paper copy so I got it through my local librarian. So the next day I got it.'* (Physiotherapist)

The interviewees were asked what changes they had observed in the following after receiving training:

	More	Less	Same
Number of literature searches made	4		5
Browsing for current developments/research	6	1	3
Confidence in finding library resources	8		2
Speed in finding required published information	8		
Confidence in finding quality information	5		1
Finding the information you need	7		

*Table 17 Changes in searching among training group*

The results showed that five of the group reported that the number of literature searches they made had remained the same after receiving training. Four said that they were making more literature searches.

*'Well I would think it's probably about the same. But I think how you obtain your information is a bit more structured and easier to access.'* (Sister)

*'I think we've got the confidence to do more searches but again we're limited in time and the resource to be honest. That's what stops us, because it's something that would be nice to be able to do but we're so 'hands-on' here. .... So things like literature searches we just don't have that time to do it, unfortunately. Although I would say from Jean's training, because she's very good, that we do have the confidence and I certainly have. I was quite computer literate before but I've certainly have got reference points where I know I can go to that and think 'oh yeah, that's something that Jean talked about and I know how to do that'. I know I can actually work with the sheet that she gave us and the notes I made, what to look up, do you know what I mean? And my colleagues who didn't have as much training would certainly feel more comfortable in doing that. But again, we're just limited in actually being able to do it.'* (Physiotherapist)

*'More literature searches, because initially we were only going to say one, say Medline, and then we couldn't go any further. And now we can link it to those different journals and save the searches and things like that.'* (Physiotherapist)

Six of the group commented that their browsing for current developments or research had increased, three said that it remained the same and one reported that it had decreased (although this was because of courses coming to an end).

*'Probably more in that I'm more aware of some of the resources that are available, things like the National Electronic Library for Health and things like that.'* (Physiotherapist)

*'Less at the moment. Because courses have come to an end here until I suppose the beginning of next year now.'* (Nurse)

Confidence in finding library resources had mainly increased (as reported by eight interviewees) and two said that it remained the same.

An occupational therapist whose main contact with the clinical librarian was through a journal club commented that her confidence had increased particularly because of the regular contact.

*'Yes. Because one of the things that happens, as I was saying before, I've done some courses in finding and using the evidence, health economics, and there was another one that I did last year..... survey design. And they're very good and it's very helpful but unless you have a regular way of using the information that you've gleaned through a one-off course, your ability to use the information atrophies. And that's one of the brilliant things about working with Jean is because it's a regular thing, because it's regular support and you're developing skills that she's teaching or you're developing something that you learnt before. It's the opportunity to apply the information.'*

*'Yes I think that's improved. You get more selective don't you when you can sort of narrow your search down to what you specifically want?'* (Sister)

*'Again I would say yes but I couldn't give you an instance of when I've done that because you know I haven't had the time to actually be able to do many but I would say I would know where to narrow it down better.'* (Physiotherapist)

*'Enormously, yes.'* (Physiotherapist)

Interviewees were asked how they would have managed doing an internet/database search if they had not had the training. Two of the group said that they would have asked someone else to do the search for them. Six interviewees commented that they would have done it themselves and all except one (who was already an experienced searcher) said that it would have taken them a lot longer to find the information. One of these also said that she would have asked for information in the library if she was unable to find it herself.

*'I would probably have gone about it in a less effective way. Because I'm fairly computer literate but I probably wouldn't have sourced the resources as quickly.'* (Physiotherapist)

*'I'd have probably still had a go at trying to get it but perhaps it would've taken me longer which would have meant I'd have had less articles to look at and critique...'*

*Interviewer: Would you have gone to a library and asked for information there? Probably yes, so it would have been more time-consuming certainly yes'. (Sister)*

*'I think by trial and error really.'* (GP)



*'I suppose to be absolutely honest I would have probably done it anyway because I'm already very computer literate. But I did learn a lot from her. She came and there were about six of us there and I sort of listened in. She was very good, very good.'* (Community Team Leader)

The clinical librarian has also provided training and information skills support to the teams (See Sections 3.2 and 3.3). The results for the formal training group concur with the findings for the teams, with the impact (Section 3.2.15, 3.3.10) of the clinical librarian support being an improvement in searching competence and confidence.

### **3.5.6 Reasons why formal training has not affected clinical practice**

A GP was the only training group interviewee who said that he did not find the information in good time.

*'No I didn't. I was having difficulty. But I think I got most of what I needed in fact'*

None of the training group reported that the information was needed urgently. Previous Sections (3.2.11) discuss how clinical librarian support evolves, and that more focused support e.g. in sustaining journal clubs (Section 3.1.5) may appear to many health professionals a more relevant reasons for providing training.

### **3.5.7 Team support and clinical governance (NE Wales, Glan Clwyd)**

Seventy nine per cent of the interviewees from the teams commented that they are now more aware of current developments and research (since the availability of the clinical librarian services).

*'Well definitely because you know there are colleagues, even though I might not be using her, my colleagues are coming back with information as well, so yeah we're all developing because of the new research and it's just keeping us informed and on top of everything really.'* (CAP - social worker)

*'Yes, that's what I feel is the main advantage of it because it's so easy to get evidence-based current literature on whatever problem that you are faced with.'* (Psychiatry - junior doctor)

Two of the respondents said that they kept up to date anyway with current developments so weren't necessarily more aware.

*'Well I try to stay ahead anyway. Well not ahead but up-to-date. So I wouldn't say that the availability of literature searches keeps me up-to-date because the journals keep me up-to-date.'* (Lung - consultant)

*'I actually keep in touch, but I think, um I'm not sure that I could say yes to that.'* (Psychiatry - junior doctor)

And one felt that it was not more awareness of current developments but the ability to use the information more efficiently that was important.

*'I'm not sure that I can answer that as a 'yes' because it's not to update us on what's currently available because there's a lot of that coming in all the time and being published all the time. It's more helping us to use what's available and there are a huge number of studies available, to be able to use it better and more efficiently.'* (ICU - consultant)

### **3.5.8 Impact of searches by Clinical Librarian for teams (NE Wales, Glan Clwyd)**

With each search done by the Clinical Librarian for one of the multidisciplinary teams, a feedback form was included. Of the 34 feedback forms returned (including 14 from Psychiatry, 6 from Nutrition, 5 from CAP) all noted that the information was received in time to meet the information needs at the time, and only one response indicated that the

search results were not useful. All the interviewees agreed that the information was found in good time, and 25% of the interviewees stated that the information had been required urgently.

*'Sometimes things are needed urgently, you know if you've got a patient on the ward and it's pertinent to their care, sometimes you know we need it within twenty four hours. And she's never let us down, she's been very quick with it.'*

The immediate cognitive impact was that some of the information was new, although some confirmed what was suspected and refreshed the memory of some details (Table 18). Some of the information was in most cases immediately applicable, and the results would almost always be shared with colleagues. In the interviews with the teams, 85% of the respondents stated they shared the information found by the Clinical Librarian with colleagues and 12% reported that the information was shared widely.. In fact, 10% of the interviewees commented that the information was, or would be shared with patients.

The information...(n=34)	Agree (%)	Disagree	Not applicable / no answer
Refreshed memory of details, facts	24 (70.6%)	4	6
Provided some new information	30 (88.2%)	2	2
Substantiated what was known or suspected	28 (82.4%)	2	4
Some could be used immediately	26 (76.5%)	5	3
More information will need to be obtained on topic	24 (70.6%)	7	3
Expected to find something else	9 (26.5%)	17 (50%)	8
Will be shared with colleagues	32 (94.1%)	0	2
Will be added to my personal collection	32 (94.1%)	0	2

Table 18 Immediate cognitive impact of information supplied<sup>3</sup>

The impact on clinical decision making was mostly associated with checking that a proposed therapy or treatment plan was the best choice, and just over 50% of the searches resulted, or may in future result, to changes to the treatment plan (Table 19).

The information supplied contributed, or will contribute to ....(n=34)	Yes (%)	No	Not applicable / no response
Choice of diagnostic test	6 (17.6%)	7	21
Recognition of abnormal/ normal condition	11 (32.4%)	7	16
Differential diagnosis	7 (20.6%)	9	18
Confirmation of proposed therapy	21 (61.8%)	5	8
Identification/evaluation of alternative therapies	16 (47.1%)	4	14
Minimisation of risks of treatment	16 (47.1%)	6	12
Revision of treatment plan	18 (52.9%)	3	13
Audit or standards of care	18 (52.9%)	6	10
Improved quality of life for patient	19 (55.9%)	3	12
Legal/ethical issues	17 (50.0%)	6	11

Table 19 Impact on clinical decision making<sup>3</sup>

<sup>3</sup> Categories are based on those used in the Value project (Urquhart & Hepworth, 1995) and subsequently used in the Leicester Clinical Librarian project evaluation.

Comments on the questionnaire returns indicated that the service was very valuable or 'excellent' (8 similar comments) and that the speed of response was 'excellent' (6 similar comments). There was some evidence that changes in service delivery might be evidence-based with a service such as this:

*'given information to develop ideas' (2 similar comments)*

*'valuable information obtained' (2 similar comments)*

*'impressed with scope of data search' (2 similar comments)*

*'enabling well informed decisions' (2 similar comments)*

*'enabled service to get off ground'*

*'basic service for evidence-based practice'*

*'able to present points to a meeting/group' (3 similar comments)*

*'crucial difference for research/journal clubs'*

Interviews confirmed that the main impact on clinical practice was on patient management and therapy. None of the interviewees considered that the information found aided diagnosis but most of the searches contributed towards patient management and/or therapy (76% patient management and 55% therapy).

*'In enabling us to be more effective and more concise in the report that we're creating at the moment. But also in the future from a perspective of using the most recent information available so that we're doing the most up-to-date therapy with clients, and providing the most up-to-date information material with clients.'* (CAP - OT)

*'Well I mean it helped a lot because we didn't know the best regime beforehand and we were able to apply that subsequently.'* (NST - consultant)

*Well I think it's been very useful because we started using fish oils on quite a few of our patients in hospital. So it gave us the confidence to go and do that.'* (Psychiatry - junior doctor)

*'Yes, I'd say it has. I mean another search, the one that she did before was on recovered memories and the idea of therapy that they might remember things that they haven't previously been aware of. That's a contentious issue and I think the information that she retrieved on that did.'* (Psychiatry - consultant)

In quite a few instances the information found confirmed and supported the treatment that was already being given.

*'Yeah it would support the work that was going on and just give it a bit more ... I suppose the rationale behind it was there then. So yeah it certainly contributed in that way and supported what we were doing and helped staff look at the way they were approaching some of the clients and suitable interventions that would help.'* (PSY - doctor)

*'It's been reassuring in terms of the fact that what I'm doing is correct and it's highlighted the lack of research there is around a lot of other practices. And also highlighted the fact that I know I'm in a very new post but there aren't many other therapists in the position that I'm in, in the UK but actually the work I'm doing is*

*quite rare and in terms of being resourced. So therefore I really should write it up. It's given me some enthusiasm to do it though.'* (Nutrition - therapist)

*'Well because we've got the most up-to-date information at our fingertips so that in effect enhances our practice because we're using what's currently available. We're not using outdated practices. It also backs up what we're already doing and what we're already using. Because sometimes what we are doing is actually best practice so we're doing it right and we don't need to change it. And the information actually backs that up.'* (Urology - consultant)

Seven respondents thought that the information found would contribute towards a publication (in the CAP, Lung, Nutrition and Psychiatry groups.)

The CAP, ICU, Nutrition and Psychiatry groups in particular had used or were intending to use the information for presentations (in all, 55% of those interviewed).

Almost all the interviewees in the CAP, Nutrition and Psychiatry groups commented that the information found would contribute towards CPD and more than half in the Lung and Urology groups (in all, 79% of interviewees).

In one instance, cost savings were identified.

*'Right, one piece of information that we were looking at was on looking at a new method of airway control in the anaesthetised patient. And it was quite an expensive way, an expensive piece of equipment. And we looked at that to see if we should be buying it and having it in place. And following that we decided that it probably wasn't something that needed to be for every patient and that there were training issues involved in it and there was more work that needed to be done before we could actually introduce it. So it stopped us buying something straight away that we might have bought and not utilised to the full.'* (ICU - consultant)

### **3.5.9 Alternatives to using the clinical librarian service**

The interviewees were asked what they would do if the clinical librarian had not done the search for them and what the alternatives were to using her services.

Fifty-eight per cent of the respondents said that they would have had to do the search themselves, in most cases taking up much of their time.

*'I think I would have had to have seen less patients. We call them service users, but I would have had to have cut my time really and gone and done that myself. I mean I do have effective research skills, I do have a Masters, but I think it's the time factor and that Jean can perhaps be more focused in finding the sort of information that we request really. Whereas personally I've been getting a bit distracted and I would go off at different tangents, so I probably would have taken much longer to get that information.'* (CAP OT)

*'Got extremely stressed! I think there's two problems there. I think one, we would have attempted to do some of it ourselves but because of our workloads, are extremely stressed already, the likelihood of being able to do it was very low. Therefore we wouldn't have been as effective.'* (CAP OT)

Seven of the interviewees commented that they would have had to do the search in their own time.

*'Do it myself. That would have taken a lot longer because of time restraints, the poor quality of the IT set-up that I have in that during working hours it's very difficult to stay online long enough to do internet searches. But previously, prior to*

*the service being available to me, I've had to do all data searches myself and more often or not that's taken an hour or two in my own time at home.'* (Nutrition - consultant)

*'I would have most probably had to go to the library myself and do the search after work, after five o'clock, on the way home.'* (CAP nurse)

A consultant in the Urology group was certainly appreciative of the time saved by the clinical librarian.

*'Well it would mean I would have to do it late at night, often not being able to get to the library, having had a full day's work and often do it on call or whatever. Trying to find a slot of time in your busy schedule for you to make a trip to the library, do a search on the internet in the office or whatever, go to the library, see if you can get the papers, she does all that which is very helpful to us.'*

The Training group were asked regarding a recent search they had done, what they would have done before receiving training. Half of them stated that they would have done the search themselves but it would have taken them longer.

*'I'd have probably still had a go at trying to get it but perhaps it would've take me longer which would have meant I'd have had less articles to look at and critique.'* (Nurse)

*'I would probably have gone about it in a less effective way. Because I'm fairly computer literate but I probably wouldn't have sourced the resources as quickly.'* (Physiotherapist)

Four respondents in the other groups commented that there was no alternative to the clinical librarian's services and two reported her work was invaluable and had greatly improved doctors' education.

*'Well I think that the main thing that she has done for us is that she has enabled us to do critical appraisal. If she hadn't been coming and teaching us that and getting the papers for us, we would still have been in the situation where when we looked at a paper, we didn't read it properly. So I think in our department, a major plus for us is that we've been properly educated in how to appraise papers and that she has gone to get the papers and has distributed the papers for us to be then able to look at. So she's improved our education on how to look at papers and she's improved our education on the topic of the papers that we have discussed.'* (ICU - Consultant)

*'I think it would have been very difficult to do this in this particular way because I don't feel that we have administrative skills, I don't. So I don't think we have the time either. So I think the development of our journal club in this direction has only been possible thanks to her.'* (ICU - consultant)

### **3.5.10 Impact of clinical librarian service on clinical governance, clinical practice**

The clinical librarian service has improved:

- Information searching skills, both formally and informally. Health professionals are more competent and more confident in searching for the evidence
- Health professionals are more aware of recent research and developments, particularly those that matter
- The majority of the literature searches done by the clinical librarian did, or may in future, change treatment plans for patients

- The searches provide a broader perspective on the therapies being provided currently, confirming what works and identifying what might be improved

## 3.6 Clinical librarian services in the future

### 3.6.1 Value of the clinical librarian to the team

Nearly two thirds of the interviewees stressed that the information found by the clinical librarian was valuable to the whole team and was beneficial to the working of the team.

*'Oh it's equally valuable for the whole team'. (Urology - consultant)*

*'It would be very valuable because our team's a pilot project for two years and if we don't have the outcome measures, then the team may not get the funding to continue. In that way it's a great benefit.'* (OT - CAP)

*'Well I think it's been very useful because we started using fish oils on quite a few of our patients in hospital. So it gave us the confidence to go and do that.'* (Psychiatry - Junior Doctor)

*'I certainly do, yeah. I think it's exploring something that does impact on clients and it just makes me aware of research that's out there which I otherwise wouldn't be aware of. But I do find as I say that information I've gathered does crop up in interactions we're having with the team. It does have relevance.'* (Psychiatry - Social Worker)

Again the interviewees were asked about the cost-effectiveness of the clinical librarian service, this time in relation to the time that the use of the service has saved the team.

Time saved team (according to team member) by using CL service							
	Consultants	Doctors	Nurses	PAM	Other	TOTAL	Total average hours
Up to 30mins							0
30mins - 1 hr							0
1 - 2 hrs				1		1	1.5
2 - 3 hrs							0
3 - 4 hrs							0
4 - 5 hrs		1				1	4.5
5hr - 1 day	1 (6 hrs)				1 (7.5 hrs)	2	13.5
More than 1 day	1(3 days)		1 (1 day)	1 (1 day)		3	35
<b>Total time saved (hours)</b>	<b>27</b>	<b>4.5</b>	<b>7</b>	<b>8.5</b>	<b>7.5</b>		
None	1					1	
Can't say	2	2	1	1		6	

Table 20 Estimates by staff of time saved for their team

The same information is rearranged below to reflect how much time the clinical librarian saved each team. It appears that individual members of the Nutrition team and CAP team consider that their teams use the clinical librarian service more than the other teams, and Psychiatry have required far more literature searches than indicated in Table 21. However many of the interviewees could not give an estimate of time saved by the teams, and in fact the changes are more complex.

<b>Time saved team by using clinical librarian service</b>							
	CAP	ICU	Lung	Nutrition	Psychiatry	Urology	<b>Total hours saved</b>
Up to 30mins							
30mins - 1 hr							
1 - 2 hrs							
2 - 3 hrs							
3 - 4 hrs							
4 - 5 hrs					1	1	
5hr - 1 day							
More than 1 day	2			3			
<b>Total average hrs</b>	<b>14.5</b>	<b>0</b>	<b>0</b>	<b>29.5</b>	<b>4.5</b>	<b>6</b>	<b>54.5</b>
None		1					
Can't say	2		1		3		

Table 21 Estimate of time saved for each team

It is interesting to note that the interviewee who reported that the clinical librarian had not saved the team time, qualified it with a positive reason and was very appreciative of the clinical librarian's role in the education of the team.

*'Well you could say that she's saved us no time whatsoever because we wouldn't have done it if she wasn't there. But the fact that we have actually gone out of our way to do this when it's difficult to get people together.'* (ICU - consultant)

*'She hasn't saved us time, she's actually increased our education time, no, she's made better use of the educational time that we already had. I would say it's been invaluable on that side because previously when we were meeting up for these educational meetings, we were looking at papers uncritically, we weren't appraising them and we were probably coming to the wrong conclusions. So now we look at the papers properly and we come to the correct conclusions. So that may well save time and money and improve patient care down the line.'* (ICU - consultant)

### 3.6.2 Journal clubs

The clinical librarian service has had a positive impact on the working and organisation of some journal clubs.

*'Hugely, because now meetings which we didn't particularly like going to before, now are a sell-out. They're very well attended. People talk very frankly and they talk from facts rather than from opinion and they learn.'* (ICU - consultant)

*'So basically it's the whole process of evidence based medicine. There was nothing like this in place when we started our journal club so now at least we're practising evidence based journal clubs which is obviously a lot better.'* (ICU - consultant)

*'Yes, I think everyone, I mean there were quite a lot of doubts then and divided opinions, so I think when we discussed it in the journal club as a whole, and then I also had handouts so we were able to share all this information with all the colleagues. I think a lot of people had their ideas clarified.'* (Psychiatry - Junior Doctor)

### 3.6.3 Drawbacks to using the clinical librarian services

The majority of interviews were insistent that there were no drawbacks to using the clinical librarian service. Only seven (21%) mentioned slight problems but these were mainly due to the availability of the clinical librarian.

*'There was an area, an issue where Jean was off. She's involved in other teams as well isn't she? (She has) other work and then she was on holiday. And there was once when we had to wait quite a long time. That was because she had other groups to see as well.'* (CAP - community nurse)

*'I would say the only drawback for us is because she only has one day here. And so on a Thursday, because the girls work weekends and sometimes they have the Thursday off when they're working weekends. It's good to have the same people always here but we've managed quite well.'* (CAP - nurse)

*'I think in only that we place a great demand on them because so much of our work is developmental. I think sometimes we put a lot of pressure on Jean rather than there have been any drawbacks on the service she provides for us.'* (CAP - team manager)

There was concern that staff could become too reliant on the clinical librarian and a couple of interviewees advocated more training in searching techniques for the staff. (In fact in some instances this had already been implemented.)

*'I suppose there's a possibility that people could become reliant on somebody else to do the work that we should be doing. I mean this is something that we have a responsibility for searching out the evidence ourselves. Every professional practitioner in the Health Service has that responsibility as their own responsibility towards clinical governance. And I suppose that potentially that it could be, sit back and let other people do the work. So I guess a valuable part of what Jean's doing is that she can actually show people how to do searches although we haven't requested that. But I guess that training option is available and maybe that would be helpful. So that's the only drawback I can see.'* (Psychiatry - team manager)

*'I think, what I think is that maybe the trainees should be taught how to do this. I mean I was thinking that you know the consultants are very busy so the consultants would be more benefited by the service. And I think the trainees need to be trained to also hunt information. I think we have had like a block for programmes where Jean has actually conducted how to do a search but I think all of them haven't had the benefit. But I think we need to learn how to order the strategy for finding the keywords and how to search the different databases and collate it ..... I think the consultants have gone through all this and you know they are quite busy because of various other administrative responsibilities, so I mean I feel that the student should be offered some hands-on training, you know. I think we discussed that once with [name], that maybe once Jean does a live search in front in one of the teaching forums.'* (Psychiatry - junior doctor)

Two interviewees were slightly critical of the clinical librarian's lack of knowledge in particular subject areas. However both these individuals were appreciative of the service as a whole.

*'I guess only one, was that on one occasion I asked for research in a (particular) technique. And she came back saying there was very little related to speech therapy which there wouldn't be because it's actually a physiotherapy technique. So I guess it was me, I hadn't been explicit enough to say this is the latest physiotherapy but I still want the information. I guess it shows that you have to be quite explicit about what you want.'* (Therapist)



*'I could recall one situation where she was asked by one of our oncologists to look up a particular guideline..... And the information that she came up with was somewhat, well I wouldn't say biased, but it wasn't comprehensive because she just followed, based on that. And she had done a little summary, drawn some conclusions based on that which I thought that if you do it yourself you'd probably get a different aspect of it as well. But she did everything to the best of her knowledge and ability based on the information we told her and the information we asked her. Because she's not medically trained, she wouldn't have probed into other aspects of the findings that she's researched.'* (Consultant)

### 3.6.4 Overall satisfaction with the clinical librarian service

All the interviewees who had used the services responded in a very positive way to the clinical librarian service. The responses were categorised into 'excellent', 'invaluable', 'very good/very useful/ very important', 'good', 'quite good/quite useful/quite helpful' and the more expressive 'fantastic/brilliant/huge plus'. Table 22 is a reflection of their views.

	Overall view of the clinical librarian service						
	Consultants	Doctors	Nurses	PAM	Other	TOTAL	%
Excellent	1		3	1	2	7	21
Invaluable	1		2			3	9
<b>Very</b> good/useful/important	1	4		3		8	24
Good		1				1	3
<b>Quite</b> good/useful/helpful	1	2				3	9
Fantastic/brilliant/huge plus	2		1	1		4	12
Total	6	7	6	5	2	26	78

Table 22 Rating of the clinical librarian service by professional groups

	Overall view of the clinical librarian service							
	CAP	ICU	Lung	Nutrition	Psychiatry	Urology	TOTAL	%
Excellent	2			2	2	1	7	21
Invaluable	1	1	1				3	9
<b>Very</b> good/useful/important	1	3		1	3		8	24
Good					1		1	3
<b>Quite</b> good/useful/helpful					2	1	3	9
Fantastic/brilliant/huge plus	2			1	1		4	12
Total	6	4	1	4	9	2	26	78

Table 23 Rating of the clinical librarian service by teams

*'I really would say that it's been excellent. It's been of great benefit and she's really shown initiative and been very positive. You know I would really feel a big loss if that was taken away.'* (CAP - OT)

*'I think it's an excellent service. It's had a huge influence on the team and allows the team to develop far more effectively than we would have done without it.'* (CAP - team manager)

*'Well unhesitatingly I'd say it's been an excellent thing and it's made a huge difference.'* (Psychiatry - consultant)

*'It's brilliant, innovative, and fantastic. If we are going to use the most effective up-to-date methods, we need this type of service. She's great, puts a lot of effort in and is very approachable.'* (CAP - OT)

### **3.6.5 Views on future development of the clinical librarian service**

A final question to the interviewees was to ask them how they would like to see the service develop in the future. The responses were fairly evenly split between the following:

- **The service should be more accessible to others**

*'I think probably to be more widely available because I'm aware that it's a limited service at the moment and we're very fortunate in having access to it. The initial development should be around broadening the number of people that have access to the service.'* (CAP - team manager)

*'I think it would be good if it was available to everybody. Certainly working in the specialist area, there's a few of my colleagues that the service wasn't available to in Bangor and Wrexham and I think it would be useful to open it up to everyone really.'* (Lung - nurse)

*'I guess it would be useful to have somebody like Jean, maybe go to every discipline meeting say once a month or something and for them to give an opportunity for therapists or nurses or whoever to ask her. Because you know she's there, it makes a big difference. You can also explain what it is you're looking for. To actually have a main person I think is very useful.'* (Nutrition - therapist)

*'It's quite helpful. I find it's good to have them there. We probably could use them more often than we've been using them because they're there, they can look up things much quicker than we can. And they're able to do advanced searches more than we are, I'm pretty sure. And it saves me so much time because I've got so much, you can see from the office, so much administration and paperwork to do when I'm not doing clinical work. And I have to be in theatre within an hour and I've got to squeeze everything out to get the answers. So her work is quite valuable to us.'* (Urology - consultant)

- **There should be more searching skills training for staff (and perhaps less reliance on the clinical librarian for searching)**

*'I think it would be helpful for training, specifically around literature searches and how to access the literature but also some guidance around robustness and quality of the literature that's found because not everything that you read can you take as being wholly true. It depends on the methodology, so something along those lines that would help people to discern quality research from not quite such good quality research.'* (Psychiatry - team manager)

*'Because in a way it would make more sense if she could teach us to do some things ourselves, you know like the simple things. And then use her time for the more complex things because that might be a better use of her time, you know, with the sort of dinosaurs like me and probably other consultants. But I've always found her very available and speedy so I can't think of any criticisms. I can't think of any improvements.'* (Psychiatry - consultant)

*'I think really probably in two ways really. One is I think there's always going to be a role and there should be a legitimate role for people who have a research interest to delegate that task of searching to someone who is competent. I think it's one thing to expect practitioners to implement new findings, it's another thing to expect them also to trawl a vast sea of existing research just to locate those findings. I think there's a legitimate place for practitioners to use the service merely in order to generate evidence-based material for them to use. But also I think indirectly, we should try and create a culture, and the librarian can be a part of this, whereby each and every practitioner becomes more competent to search the internet for relevant material. So I think it's a two prong thing really, there's doing the research for people and passing on the result and there's also a necessity to become more competent in the research themselves. But I think that's a realistic balance.'* (Psychiatry - social worker)

- **For the service to continue as it is**

*'Well to continue really, we just don't want her to go. We'd just like her, if she could, to just carry on and you know to try and get the searches that we ask for and just to continue what she's doing really. I don't think she could improve really. You know as soon as we ask her to get anything, she does her very best and if she can't get it, then obviously she'll explain why and if not, she'll get the nearest thing, sort of abstracts or whatever. But we've had some full literature, the actual documents from her as well.'* (Nutrition - nurse)

*'I think it's quite useful and very handy to know what's the latest and what we're doing, how much of it is evidence-based. I hope it carries on, yes.'* (Psychiatry - junior doctor)

*'Um, no I think she just gives a hundred per cent service at the moment. She's marvellous.'* (Nutrition - nurse)

- **Other responses, which included the further development of the journal clubs, and a 'Critically Appraised Topics' type of database**

*'One thing which we had in mind was that you know, say in the last six months, eight months, we had a lot of searches made. There is no database or some central place where all this can be stored to prevent repetition. In the sense you know, like someone has done some search say in January this year, so if I get an idea, at least if I look up the database and see if it's already been done. So that would save both Jean's time and our time, you know. There are some ideas I think for getting this online but I don't think it has gone very far.'* (Psychiatry - junior doctor)

*'I mean obviously I'd like this to carry on developing. It's changed quite a bit in the past, I mean the journal club. It's changed quite a bit in the past month with the clinical librarian's input. And we thought we'd just run it as it is for a few more months until we feel a need to progress to another level or another stage. But otherwise it's also reassuring to know that if I did need an urgent search for something clinical, you know, a patient has got a (unclear) or something like that, then I'd like to know that the service is there.'* (ICU - consultant)

*'I'm sure like with the developments that are happening. The journal club is going to be more refined, more people's involvement and it's going to be in stages like we do it in one session in journal club now but we are planning to do it in two or three sessions. Evidence base is presented and we sort of pick up a paper, then do the particular appraisal the following week, so I'm sure that it's going to develop in the coming weeks.'* (Psychiatry - junior doctor)

*'Well it still is developing and Jean's helped to structure this journal club stroke evidence-based practice stuff, so I think we need to consolidate that and see how that runs for the next six or nine months.'* (Psychiatry - consultant)

Interviewees who had not had personal experience of using the clinical librarian service were asked to give their team's views (if they were known). Three reported that their team had positive views of the service and one did not know his team's opinion.

*'I think it will be extremely useful especially for those who are very busy and can't, you know, look it up themselves and don't know how to do it. And definitely to get quick answers to problems, you know it would be quite useful to have someone to be able to do it.'* (Psychiatry - staff grade doctor)

*'I think it's a quite useful service. Well I've certainly not come across it before. It expands our possibilities for us really in the research context more than it would have done otherwise.'* (Psychiatry - junior doctor)

### 3.7 Scenarios for cost-savings

#### 3.7.1 Developing scenarios: searching time changes

Previous studies of the impact of clinical librarian services on staff time costs have focused on staff substitution costs<sup>4</sup>, comparing the costs per hour of searching. The findings for this study indicate that the situation is more complex as the impact of the clinical librarian is to change the patterns of searching behaviour.

The impact of the clinical librarian is to:

- Increase the willingness of doctors and other staff to spend time searching (Section 3.3.10)
- 'save time' for staff on searches – around half the interviewees noted that they would have conducted a search themselves if the clinical librarian had not been available to do the search for them (Section 3.5.9)
- Encourage staff to delegate searching to clinical librarian (Section 3.1.14-3.1.15) – nearly 50% of staff had delegated searches that were specifically urgent and generally important

The comparatively small number of responses from non-medical staff make estimation of possible cost savings difficult and the scenarios presented will focus on the cost savings achieved for medical staff, and the potential staff cost savings offered with a clinical librarian service to support clinical governance.

Studies which have estimated the number of clinical questions that arise in clinical practice note that many of the questions that may arise are never properly expressed, and may never be pursued. In a recent American study<sup>5</sup>, the number of questions asked averaged 5.5 questions per physician per half day observation period. In the UK, it is likely that more patients would be seen in the day, and from one perspective more clinical questions may arise, as more patient problems would be observed. However, it is probable that some of the clinical questions are rarely formulated as there is little time to reflect.

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<sup>4</sup> Booth A, Sutton A, Falzon L. *Evaluation of the clinical librarian project: University Hospitals of Leicester NHS Trust*. Sheffield: University of Sheffield, SchARR, 2002.

<sup>5</sup> Ely JW, Osheroff JA, Chambliss ML, Ebell MH, Rosenbaum ME. Answering physicians' clinical questions: obstacles and potential solutions. *JAMIA* 2005; 12 (2): 217-224.

- A reasonable estimate of the likely number of clinical questions that could arise would be 7 questions per day.

Most of these questions should be easily answered – otherwise it is hard to justify the continued success of the ‘doctors’ handbook’ type of publication, in printed or electronic format. Previous studies suggest that doctors are only likely to pursue questions which are urgent and/or likely to have an answer.<sup>6 7</sup> One reason why the doctors in this research appeared more willing to search for information at the final stage might be based on their experience of the searches conducted by the clinical librarian (showing that results could be found) and their improved searching skills (increasing their confidence and competence in finding information).

If, for seven clinical questions per day per doctor, one can assume that around half the questions are very quick to answer, that leaves around three or four questions that make take longer to search. Searches were categorised according to their specificity (for the care of one patient or of relevance to the care of other patients), their importance (to patient care) and their degree of personal interest to the health professional. Health staff were asked how long they would spend searching for information on various types of search. For the scenario comparisons the following breakdown of possible searches is used:

- Possible searches per day, per doctor:
  - 2 specifically urgent, generally important questions
  - 2 specifically urgent, not important questions
  - 1 generally important, not urgent question
  - 1 generally important and personal interest question
  - 1 question of personal interest only

Over a five-working day week, 35 questions may arise. Of these, studies suggest that only around half may be pursued. For ease of calculation, assume that only 14 questions are likely to be pursued per week. The scenario calculations for the probable breakdown of searches use:

- Probable searches per week per doctor:
  - 4 specifically urgent, generally important questions
  - 4 specifically urgent, not important questions
  - 2 generally important, not urgent questions
  - 2 generally important and personal interest questions
  - 2 questions of personal interest only

At baseline, taking the average time spent searching, based on the mid-point of each range (5 minutes, 20 minutes, 45 minutes) with 80 minutes as the average value for searches over one hour (Figures 29, 30, 31) doctors were likely to spend, on average:

23 minutes on specifically urgent and generally important questions  
 16 minutes on specifically urgent, not important questions  
 20 minutes on generally important, not urgent questions  
 28 minutes on generally important and personal interest questions  
 31 minutes on personal interest questions

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<sup>6</sup> Gorman PN, Helfand M. Information seeking in primary care: how physicians choose which clinical questions to pursue and which to leave unanswered. *Medical Decision Making* 1995; 15: 113-119.

<sup>7</sup> Urquhart C. *Models of information value based on reliability and risk for clinical decision making*. Aberystwyth: University of Wales Aberystwyth, 2000. PhD thesis (Chapter 5).

The time taken on searching at **baseline** totals:  $23*4 + 16*4 + 20*2 + 28*2 + 31*2$  minutes = **314** minutes per week, per doctor, on average.

At the final stage, using the same method of calculation, a doctor was likely to spend, on average:

25 minutes on specifically urgent and generally important questions  
23 minutes on specifically urgent, not important questions  
28 minutes on generally important, not urgent questions  
40 minutes on generally important and personal interest questions  
42 minutes on personal interest questions

The time taken for searching, at the **final** stage, totals:  $25*4 + 23*4 + 28*2 + 40*2 + 42*2$  = **412** minutes per week, per doctor, on average. The subjective estimates of the doctors themselves, when asked in interviews for an estimate of the time they would spend per week searching for information (Table 12) was 375 minutes (consultants n=3) and 675 minutes (junior doctors n=4). The figure of 412 minutes does therefore seem to be reasonable. Tables 7, 8, and 9 contain details of the time spent on particular types of query (subjective estimates) and the pattern is similar, although the interviewees' time values are generally higher. The consultant interviewees indicated they spent about the same amount of time searching for generally important information as they would do for information of personal interest, but the amount of time spent on specific and urgent information was around half that time. The junior doctors spent most time on information that was generally important, around half that time on information of personal interest, and slightly under half the maximum on specific and urgent information. The modal upper limit for time spent searching, according to the tables, is **2 hours**.

It should also be noted that the calculations of the averages may be affected by some outlier values, particularly for the calculation of the 'specifically urgent and generally important' category.

The effect of the clinical librarian working on the team is likely to increase the amount of time spent by doctors on searching for information (and clinical governance). On the basis of the figures above, each doctor is likely to spend **98** minutes more per week on searching.

The costs of that searching time can be calculated using unit costs of health and social care staff and services<sup>8</sup>. The following figures, for basic unit costs excluding qualifications, have been used:

Consultant	£69.00 per hour
Specialist registrar	£25 per hour
(average between unit cost per hour on duty of £20 and £29 unit cost per hour worked)	
Senior House Officer (SHO)	£21 per hour
(average between unit cost per hour on duty of £17 and £25 per hour worked)	
Clinical librarian	£18 per hour
(based on salary + salary oncosts of £15.50 per hour plus overheads (£2450 indirect overheads and capital overheads of £2,052 = ward manager rates, to reflect share of library space)	

On that basis the costs of the extra searching time per week, for various grades of medical staff, be:

Consultant:	£112.70
Specialist registrar	£40.83
SHO	£34.30

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<sup>8</sup> Curtis L, Netten A. *Unit costs of health and social care 2004*. Canterbury: Univ Kent Personal Social Services Research Unit (PSSRU), 2004.

This calculation ignores, at this stage, any estimation of the increased effectiveness of the searching.

Findings also indicated that doctors were willing to delegate their searching to the clinical librarian (Section 3.1.15).

Table 24 indicates the searching minutes delegated, per week, for two patterns of delegation behaviour, actual and potential. (The fact that the figure of 98.4 minutes also occurs as the number of minutes per week delegated, almost exactly the same as the number of extra minutes spent searching is completely coincidental).

Type of search	Have delegated	Average time spent per week	Minutes delegated per week	Might consider	Average time spent per week	Minutes that might be delegated per week
Specifically urgent, and generally important	37%	100	37.0	46	100	46.0
Specifically urgent, not generally important, not of personal interest	22%	92	20.2	46	92	42.3
Generally important, not urgent, not of personal interest	24%	56	13.4	63	56	35.3
Generally important, of personal interest	22%	80	17.6	54	80	43.2
Of personal interest (only)	12%	84	10.1	56	84	47.0
Totals		412	<b>98.4 (actual)</b>			<b>213.8 (potential)</b>

*Table 24 Estimates of delegated search time*

The outcome is, strangely, but obviously, cost-neutral at this stage. Although doctors may be spending more time searching, they are also prepared to delegate the searching to the clinical librarian. If a clinical librarian service performs more searches on behalf of clinical staff, particularly the more senior staff, there are potential cost savings – if it can be assumed that the 98 extra minutes spent per week searching is the maximum, and that searching time per week will not exceed 412 minutes.

Before clinical librarian: time spent searching: 314 minutes per week  
 After clinical librarian time spent searching 412 minutes per week  
 Of this time, 98.4 minutes are delegated.  
 Net change in actual searching time =  $412 - 314 - 98.4 = 0.4$  minutes less per doctor, per week.  
 Potential change in searching time =  $412 - 314 - 213.8 = 115.8$  minutes less per doctor per week.

At present, therefore, the impact of the clinical librarian appears cost neutral. However, the calculations assume that the output of the searching time will be the same, whether

the clinical librarian searches or whether the doctor does the searching. The findings indicate that this is not the case. Section 3.5.7, for example, suggests that the impact has been less the staff substitution (skill mix changes) but the enhanced impact on critical appraisal and clinical governance. The evaluation could not examine how much less time the clinical librarian spent on a search, compared with a health professional doing the same search, but Section 3.3.13, Section 3.5.9 indicate that health professionals believe that the searches done by the clinical librarian are usually as effective, but performed far more efficiently, and probably more comprehensively.

Figure 3, Section 3.1.2 illustrates the differences among the teams on the number of searches the teams asked the clinical librarian to perform. For the scenarios, a figure of 14 searches per month will be used – 3.5 searches per week. These are assumed to be the lengthier searches. The clinical librarian service also covered considerable training and journal club support, and searches associated with these aspects are not included in that figure.

A recent development in the National Library for Health (England) is the possible provision of clinical question answering services. For the purposes of the scenario development it is assumed that some questions in the future will be diverted to a more centralised clinical question answering service which may operated on a UK-wide or home country basis.

### 3.7.2 Scenario one: literature search service focus

This scenario assumes that the service to a team is focused on supporting the literature search requests.

The team consists of consultant (1), specialist registrar (2), SHOs (5), eight doctors in total. Together they may be estimated to generate 14 x 8 clinical questions (112 questions) in one week which they are likely to pursue.

Around 5% of the searches (8 questions, one for each doctor) are delegated to a local clinical librarian service as other questions may be sent to a clinical question answering service, and other searches done by the doctors themselves.

The searches delegated are the searches which are the most time consuming to do, on average, and the doctors would be prepared to spend, on average, two hours on each question.

Total medical staff time costs if searches not delegated =  $£69 \times 2 + £25 \times 2 \times 2 + £21 \times 2 \times 5$   
= £448 per week

If the clinical librarian pursues these searches, the time taken to develop and discuss the searches needs to be taken into consideration as well (time spent in clinical meetings). This might be estimated at around 15-30 minutes per question. The clinical librarian service will also provide a 'cover sheet' summary. If it can be assumed that the clinical librarian would do the searches much faster than the doctors, then the time spent per search by the clinical librarian would be:

Work-up for each search	= 20 minutes
Search time	= 90 minutes (for a comprehensive search)
Preparation of summary	= 20 minutes

Total time per search = 130 minutes

Total clinical librarian staff time costs for eight delegated searches =  $£18 \times 130 / 60 \times 8$   
= £312 per week

Staff time savings per week = £136



From the team perspective, there is a staff time saving, but also there are benefits to team learning as the search results may be more easily shared among the team.

### 3.7.3 Scenario two: critical appraisal support focus

This scenario assumes that the main focus of the clinical librarian service is on supporting journal clubs (for junior doctors). The emphasis is on ensuring that their searching is more effective and efficient. Each SHO is assumed to have 3 hours 'education time' a week. Assume that the number of SHOs varies, as it does. In setting A there are 10, in setting B, 30. Their journal club work requires, for all involved,

Setting A. Preparation: 3 hours (one SHO) plus 10 hours (journal club session, all 10 involved), plus follow-up reading for 5 hours (half hour each SHO)

Setting B. Preparation: 3 hours (one SHO) plus 30 hours (journal club session, all 30 involved), plus follow-up reading for 15 hours (half hour each SHO)

The contribution of the clinical librarian is to make the SHO searching more effective, as indicated in the evaluation findings. The time required for all the SHOs to do further work should be reduced as the learning time within the journal club session is more effective.

Time required is 4 hours from the clinical librarian, working in two 2-hour sessions with the SHO.

A SHO staff time costs prior to clinical librarian input = £21\*18  
= £378 per session

B SHO staff time costs prior to clinical librarian input = £21\*48  
= £1008 per session

If the effect of the clinical librarian is to reduce the amount of further reading required by the SHOs the time requirements are estimated as:

Setting A, B SHO preparation time costs: 6 hours (2 two hour sessions with clinical librarian plus a further two hours of searching on their own) = £21\*6 = £126

Clinical librarian time = £18\*4 = £72 (and £90 if attending the journal club)

If the requirement for further reading is reduced to zero, then staff time costs are:

Setting A: £126 (SHO preparation) + £72 (clinical librarian) + £210 (SHO journal club)  
= £408 (£426 if clinical librarian attends the journal club)

Setting B: £126 (SHO preparation) + £72 (clinical librarian) + £630 (SHO journal club)  
= £828

Difference (setting A) = additional staff time cost of £30

Difference (setting B) = reduced staff time cost of £180

With larger journal clubs the clinical librarian input not only makes the journal clubs more effective, but also should also make them more cost-efficient.

The results from the general information skills training sessions are equivocal. Those trained may do more searching now, and search more effectively (Sections 3.5.1 to 3.5.7). A conservative estimate might be that those trained spend one hour less per week on searching, but search more effectively when they do so, so that more (and better) searches are done overall. Obviously the overall staff time cost savings are dependent on the composition of the training group, and the time required by the clinical librarian to do the training, and the time required by staff to attend.

## 4 Conclusions

### 4.1 Summary evidence for evaluation objectives

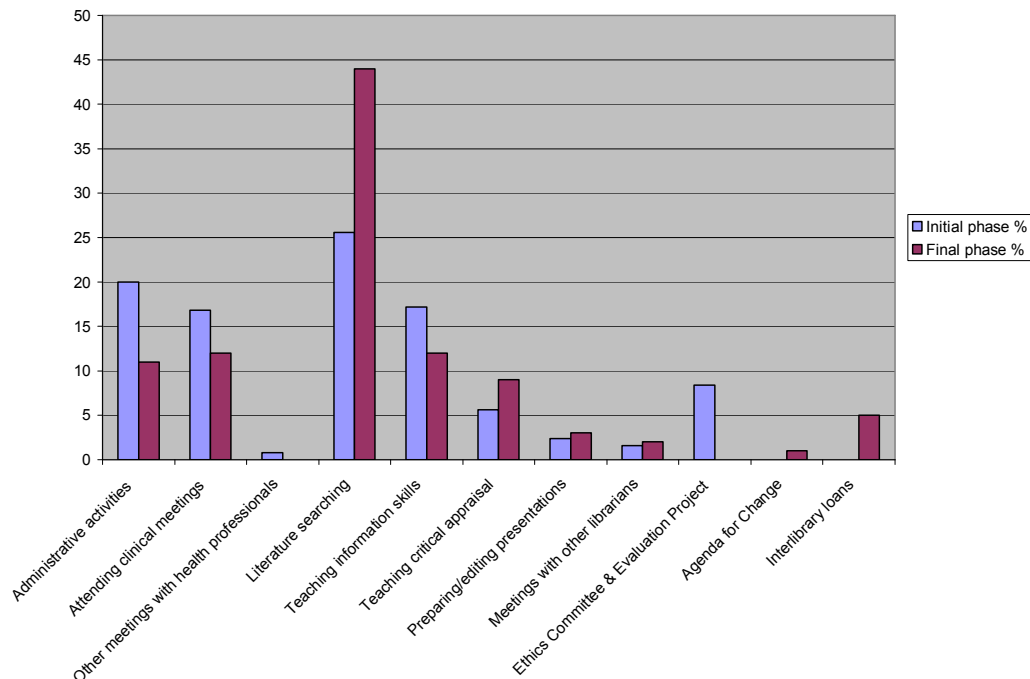
The aim of the evaluation was to provide evidence to inform future structures of health library support for clinical governance. Together, the impact on clinical practice, and the impact on health library activities allows some lessons to be drawn for future development of health library services in Wales.

The evaluation objectives were to:

- Assess which aspects of the clinical librarian services were used (Section 4.1.1)
- Estimate time (and money saved) through clinical librarian searches, compared with searching conducted by clinical staff (Section 4.1.2)
- Estimate the effect of information skills training on staff searching patterns, and time taken to search (Section 4.1.3)
- Examine the benefits to clinical practice, in terms of reduction in risk, development of clinical guidelines, implementation of national clinical policies (Section 4.1.4).
- Examine whether information skills training has affected skills and confidence (Section 4.1.5)
- Explain some of the factors affecting the working of the clinical multidisciplinary teams with the clinical librarian involved, and whether attitudes towards the clinical librarian changed (Section 4.1.6)

#### 4.1.1 Scope of CL activities

There have been shifts in the nature of the clinical librarian activities over the period, as the overviews of the team activities (Sections 3.1.6 – 3.1.12) indicate. The main changes have concerned the shift in the scale and scope of the activity with the multidisciplinary teams, the shift to a more holistic approach to information skills support in North West Wales with journal club support becoming more important than discrete information skills training sessions. Figure 39 indicates that the administrative elements are being reduced, or at least streamlined now, with far more time being spent on literature searching in the final phase than in the main phase, and less time spent on administration, attending clinical meetings, and teaching information skills.



*Figure 39 Proportion of time spent by clinical librarian on various tasks*

What has worked and what has not worked so well depends partly on the team, and the working culture within the team. There has been a regular reappraisal by the clinical librarian and the teams, a type of SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis of the progress of the work with the various teams and the NW Wales training. This has helped to ensure that the work is prioritised effectively.

The evaluation of the various team attitudes towards the service confirm that the decisions taken to scale down activities in some teams and expand other areas are justified. For example, Figure 38 illustrates that preferences for spending by the Lung team closely follow those for the Glan Clwyd control group. Change can be slow, and there may be contradictory findings on the confidence and competence in searching in the intermediate stages (Section 3.2.11). For the newer teams, one-to-one support may be the most valuable contribution by the clinical librarian. In the more established teams, it may be easier to fit around existing structures such as case presentations, and alter the processes to increase their impact on clinical governance.

#### **4.1.2 Cost savings through delegation of searching**

The evaluation showed that most health staff were happy to delegate a proportion of their searching on clinical questions to the clinical librarian. It is difficult to estimate how much time would be saved (as the clinical librarian is likely to do the searches faster, but that type of difference was not measured in the evaluation). The impact of the clinical librarian on the team was also to increase the amount of time spent by health professionals on searching. This is, of course, advantageous to clinical governance in the long term.

A very conservative estimate is that the impact is cost neutral in terms of staff time costs, although more searches are being done, more efficiently and effectively than before.

A scenario calculation, taking into account the indications that doctors might delegate more searches in the future, estimates the saving for a small medical staff team as £136 per week.

#### **4.1.3 Effect of information skills training on searching time**

The information skills training which has been most successful has been the journal club support, enhancing the critical appraisal skills of the staff. The information skills training sessions are the first rung of the critical appraisal support process, and results indicated that trainees needed additional support, as well as good access to IT, to practise skills learned in initial knowledgebase training. Initially, there may be little impact either on searching efficiency and effectiveness, or on the number of searches conducted. A conservative estimate is that the training results in staff time savings of one hour per week.

Targeted support to journal clubs has been popular and effective. Although, with clinical librarian input the costs are greater (overall) this has to be set aside the staff time costs wasted if the journal club is not effective (over £700 for SHO costs in a large journal club). The quality of the journal club activities increases substantially, for a cost of £72 in clinical librarian time.

#### **4.1.4 Benefits to clinical practice**

The clinical librarian service has improved practice:

- Health professionals are more aware of recent research and developments, particularly those that matter;
- The majority of the literature searches done by the clinical librarian did, or may in future, change treatment plans for patients;
- The searches provide a broader perspective on the therapies being provided currently, confirming what works and identifying what might be improved;
- Interviews identified one instance where costly equipment was not purchased after evidence found by the clinical librarian indicated that the cost would not be justified.

#### **4.1.5 Impact of information skills training on competence and confidence**

The clinical librarian service has:

- Improved the willingness of health staff to do their own searches;
- Improved searching effectiveness, particularly among those who were less competent previously;
- Confirmed that the clinical librarian can save time and money for the teams, and the Trusts, particularly if the longer searches are delegated;
- Identified that many of the previous needs for searches were unmet, and there will be a period of adjustment as the 'rules of engagement' on who (clinical librarian or health professional) should do which type of search among the team, and why.

#### **4.1.6 Impact on multidisciplinary working and team attitudes**

The data from the reflective practice diary complements the quantitative data on preferences for delegating searches, and satisfaction with clinical librarian services.

- Attending team meetings and 'information sharing' should evolve into work in supporting critical appraisal and journal clubs.
- Staff are willing to delegate searching, particularly searches that are urgent or important, to the clinical librarian.

The quantitative evidence indicates that having clinical librarian support for a team:

- encourages staff to search for information to support clinical decisions (thus decreasing risks to patient care of unsafe decisions);
- improves search skills among all staff groups, with the greatest effect (at this stage) among the doctors;
- changes team attitudes and cultures towards searching for the evidence – a more discriminating approach emerging as the norm.

## **4.2 Developing the clinical librarian service**

The development of clinical librarian services within the team setting might be characterised by various stages (Sections 4.2.1, 4.2.2) and the impact on the library service as a whole should be considered (Section 4.2.3).

### **4.2.1 Stage one**

**Stage one** involves attending team meetings, and providing one-to-one support, particularly among teams that are newly formed. To move to a more integrated level of support, with more collaborative working between the clinical librarian and the rest of the team, seems to require attention to the 3 R's:

- Roles – adjusting role of the clinical librarian within the team as necessary
- Responsibilities – sorting out which type of searches required should be done by the clinical librarian and which should be done by health professionals themselves
- Rationale for searching – this is best focused round distinct team needs for clinical practice or CPD, in critical appraisal support/journal clubs, for example.

### **4.2.2 Stage two**

**Stage two** involves more integrated working. The clinical librarian is supporting critical appraisal and clinical governance activities in a variety of ways. These include:

- Journal club support (the way this is done depends on the team and the professionals involved)
- Neutral change agent in more recently formed teams

The progress of clinical librarian activities beyond stage two possibly depends more on the way the team itself operates, than on the clinical librarian.

The success of the clinical librarian service can be characterised by:

- improved search skills among all staff groups
- changes in team attitudes and cultures towards searching for the evidence
- greater willingness of health professionals to do their own searches
- reduction of staff time costs on lengthy searches that may safely and effectively be delegated to the clinical librarian

The teams receiving clinical librarian services favour a shift of library spending towards:

- More information skills training – the type depends on the needs of the team, with the newer teams favouring one-to-one support and the more established teams wishing to develop critical appraisal skills training
- Clinical librarian supported teams would spend less on bookstock and journals, but spending on electronic journals is more likely to be preserved
- Pattern of spending preferences among teams receiving clinical librarian services reflects what has worked best for those teams.

#### **4.2.3 Impact on library service provision**

Organisation of the library services to provide a clinical librarian service to all teams would represent a massive change. At present, 7 wte library staff serve around 5,550 staff in Conwy & Denbighshire NHS Trust (1 library staff to 785 health staff, 1 professional librarian to 1,833 health staff). The clinical librarian serves around 100 staff within the teams served.

The impact on existing demand for library services needs to be considered but this is probably manageable. As the availability of free (to the user), full text journal articles increases, there is likely to be a decrease in the number of interlibrary loan requests overall. However, the impact of the clinical librarian service to team members who were not active library users is to increase the number of requests, initially at least.

Other research<sup>9</sup> indicates that career development routes for librarians are changing. Previously upward career advancement was seen to be straight into management of library services. Now, there are specialist career routes developing such as the clinical librarian, or specialist searchers supporting Cochrane reviews, or outreach trainers.

The future library service model might have a library services manager responsible for services across a Trust or several small Trusts. In this shared services model, there would be opportunities for specialist librarians to work as outreach trainers, clinical librarians, or research support.

Supporting this structure there would be a group of support staff, who themselves might have to specialise in tasks such as cataloguing, dealing with customer enquiries (face to face and remote enquiries). The support staff, after all, are the 'front face' of the library service to many of the users. The support staff generally work in the physical library space. The librarian may not be, as the role will require liaison work outside the library.

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<sup>9</sup> Urquhart C et al. Assessing training and professional development needs of library staff. Research undertaken for NLH. May 2005.

## **Appendix 1 Pre-session skills assessment**

Assessment was done informally by the clinical librarian in one of two ways:

- On the day of the session, with each individual
- In advance, to agree on the content of the training.

## Appendix 2 Post-training session questionnaire

Format has changed from the original

<b>1. Have you attended a Library training session before?</b>
Yes <input type="checkbox"/> ( <i>Please give details</i> ):
No <input type="checkbox"/>

<b>2. How would you rate your internet/database skills?</b>
Beginner <input type="checkbox"/> Intermediate <input type="checkbox"/> Advanced <input type="checkbox"/>

<b>3. Which part of the session did you find most helpful?</b>

<b>4. Were the course objectives and layout clear?</b>
Yes <input type="checkbox"/> No <input type="checkbox"/>

<b>5. Did you know what was expected of you in each session?</b>
Yes <input type="checkbox"/> No <input type="checkbox"/>

<b>6. Did the instructor present the material effectively and answer questions clearly?</b>
Yes <input type="checkbox"/> No <input type="checkbox"/>

<b>7. How useful did you find the practical sessions and handouts?</b>

<b>8. What, if anything, would you add or remove from the class?</b>

<b>9. Are you more confident in sourcing medical information now than you were before the course?</b>
Yes <input type="checkbox"/> No <input type="checkbox"/>

<b>10. Did the course meet your expectations? Why or why not?</b>

<b>11. Please suggest additional classes/sessions you would find useful:</b>

<b>12. Please add any other comments you might have:</b>



### Appendix 3 Training skills evaluation questionnaire

(formatting has changed from the original)

1. How would you rate your internet / database searching skills after receiving training?  
(beginner = Google searching; intermediate = can use MEDLINE or CINAHL to find articles ; advanced = devising complex search strategies, using Boolean searching)

Beginner [ ]      Intermediate [ ]      Advanced [ ]

2. Have your searching skills improved?      Y [ ] N [ ]

a. *Please explain how they have – or have not - improved:*

3. Have you performed an online search since receiving training?

Yes [ ]      No [ ]

a). *If Yes, where have you searched? Please list sources used :*

b). *If No, please go to question no 8*

4. What did you do with the information you obtained ? (please answer yes or no):

- |   |       |       |
|---|-------|-------|
| a. Did you share it with your colleagues?                   | Y [ ] | N [ ] |
| b. Did you share it with the patient?                       | Y [ ] | N [ ] |
| c. Was the information found in good time?                  | Y [ ] | N [ ] |
| d. Was it needed urgently?                                  | Y [ ] | N [ ] |
| e. Did it contribute to therapy?                            | Y [ ] | N [ ] |
| f. Did it improve inpatient/outpatient management?          | Y [ ] | N [ ] |
| g. Did it contribute towards a publication or presentation? | Y [ ] | N [ ] |
| h. Did it contribute towards CPD?                           | Y [ ] | N [ ] |

5. After the training received, what changes (if any) have you and/or your team observed in the following:

		More	Less	Same
a	Number of literature searches you make			
b	Browsing for current developments/research			
c	Your confidence in finding library resources			
d	Speed in finding required published information			
e	Confidence in finding quality information			
f	Finding the information you need			

6. Thinking of a recent Internet/database search you have done **after** the training, what would you have done if you had not had the training?

a	Nothing		e	Do other Internet search myself	
b	Gone to a library		f	Consult own books, journals	
c	Ask someone else to obtain the information		g	Consult books, journals in workplace	
d	Ask someone else for help with searching		h	Other	

7. For searches you do **now, after the training**, and including any travel time for consulting resources elsewhere, time for practising your skills, do you, **on average, per week**

a	spend <b>more</b> time searching		e	spend <b>less</b> time searching	.
b	... but less than two hours more?		f	...under two hours less?	
c	...two or more, but less than five hours more?		g	...two or more, but not as much as five hours less	
d	...more than five more?		h	...more than five hours less	

8. If you have **not** undertaken a search since training – please explain why not:

9. Would you like further training ?

Y [ ] N [ ]

- a. Please suggest training topics or areas you would like covered :

10. Are you: Doctor [ ] Nurse [ ] PAM [ ] Admin. [ ] HCA [ ]  
Other [ ]

#### Appendix 4 Interview schedule with training participants

##### NORTH WALES CLINICAL LIBRARIAN PROJECT TELEPHONE INTERVIEW SCHEDULE FOR TRAINING GROUP

6. How would you rate your internet / database searching skills after receiving training, **beginner, intermediate or advanced?**  
(beginner = Google searching; intermediate = can use MEDLINE or CINAHL to find articles ; advanced = devising complex search strategies, using Boolean searching)
7. Have your searching skills improved?  
***Please explain how they have – or have not improved?***
8. Have you performed an online search since receiving training?  
  
*If Yes, where have you searched? Which sources have you used?*  
  
*If No, please go to question no 8*
9. What did you do with the information you obtained ?
  - *Did you share it with your colleagues?*
  - *Did you share it with the patient?*
  - *Was the information found in good time?*
  - *Was it needed urgently?*
  - *Did it contribute to therapy? How?*
  - *Did it improve inpatient/outpatient management? How?*
  - *Did it contribute towards a publication or presentation? How?*
  - *Did it contribute towards CPD? How?*
10. After the training received, what changes (if any) have you and/or your team observed in the following in terms of whether it is **more, less or the same?**:
  - *The number of literature searches you make*
  - *Browsing for current developments/research*
  - *Your confidence in finding library resources*
  - *Speed in finding required published information*
  - *Confidence in finding quality information*
  - *Finding the information you need*

6. Thinking of a recent Internet/database search you have done **after** the training, what would you have done if you had not had the training?

- *Nothing*
- *Gone to a library*
- *Ask someone else to obtain the information*
- *Ask someone else for help with searching*
- *Do other Internet search yourself*
- *Consult own books, journals*
- *Consult books, journals in workplace*
- *Other*

7. For searches you do **now, after the training**, and including any travel time for consulting resources elsewhere, time for practising your skills, do you, **on average, per week**

- a) Spend **more** time searching
  - .... But less than two hours more?
  - .... Two or more, but less than five hours more?
  - .... More than five hours more?
- b) Spend **less** time searching
  - .... Under two hours less?
  - .... Two or more, but not as much as five hours less?
  - .... More than five hours less?

8. If you have **not** undertaken a search since training – please explain why not?

9. Would you like further training ?

Please suggest training topics or areas you would like covered.

***Thank you for your time***

## Appendix 5 Baseline questionnaire

(format has changed from the original)

No:

### NORTH WALES CLINICAL LIBRARIAN PROJECT QUESTIONNAIRE

1. **Do you currently use the Internet in connection with work, CPD or research?**

☐ yes ☐ no

Please look at the following options and select the statements which match your experience. If none of these do please provide your own statement in the space below.

**I search the NHS Trust website** ☐ true ☐ false

**I use a search engine like Google or Yahoo** ☐ true ☐ false

**I find I am overwhelmed by the amount of information I retrieve** ☐ true ☐ false

**I always find what I want on the Internet** ☐ true ☐ false

**I use printed sources more than the Internet** ☐ true ☐ false

**I find most of my electronic information from databases such as MEDLINE, CINAHL, the Cochrane Library, and the NeLH** ☐ true ☐ false

**I have received library skills training within the last 12 months** ☐ true ☐ false

**I usually ask a librarian for help** ☐ true ☐ false

**If none of the above match your experience, please give details here:**

2. **How would you describe your internet searching skill level?**

☐ no experience ☐ beginner ☐ intermediate  
☐ good ☐ advanced

3. You may sometimes have to check some information about patient care. You may require the information URGENTLY and SPECIFICALLY for the care of an individual patient but that information may not be GENERALLY IMPORTANT for the care of other patients. Sometimes the information is of PERSONAL INTEREST to you as you need it for course work, CPD or research.

**On average, how much time did you spend last week searching for information to answer queries which were:**

**SPECIFICALLY URGENT and GENERALLY IMPORTANT?**

☐ less than 10 mins ☐ more than 10 mins but less than 30 mins  
☐ more than 30 mins but less than 60 mins ☐ more than 60 mins

**SPECIFICALLY URGENT but not GENERALLY IMPORTANT?**

☐ less than 10 mins ☐ more than 10 mins but less than 30 mins  
☐ more than 30 mins but less than 60 mins ☐ more than 60 mins

**GENERALLY IMPORTANT but not URGENT, not of PERSONAL INTEREST?**

☐ less than 10 mins ☐ more than 10 mins but less than 30 mins  
☐ more than 30 mins but less than 60 mins ☐ more than 60 mins

**GENERALLY IMPORTANT and of PERSONAL INTEREST?**

- ☐ less than 10 mins                      ☐ more than 10 mins but less than 30 mins  
☐ more than 30 mins but less than 60 mins   ☐ more than 60 mins

**PERSONAL INTEREST (to you)?**

- ☐ less than 10 mins                      ☐ more than 10 mins but less than 30 mins  
☐ more than 30 mins but less than 60 mins   ☐ more than 60 mins

***Thank you for your cooperation***

## Appendix 6 Interview schedule for teams

### NORTH WALES CLINICAL LIBRARIAN PROJECT

#### TELEPHONE INTERVIEW

1. Have you used the services of the clinical librarian?
2. *If yes, can we discuss one recent example?*
  - *If no, go to question 10.*
3. What happened, and what did you do with the information supplied by the clinical librarian - how valuable was it?
  - *Did you share it with your colleagues?*
  - *Did you share it with the patient?*
  - *Was the information found in good time?*
  - *Was it needed urgently?*
  - *Did it aid diagnosis? **How?***
  - *Did it contribute to therapy? **How?***
  - *Did it improve patient management? (In-patient or out-patient?) **How?***
  - *Did it contribute towards a publication or presentation? **How?***
  - *Did it contribute towards CPD? **How?***
4. What would you have done if the clinical librarian had not done the search?  
What are the alternatives to using the services of the clinical librarian?
  - *Would you have to search for the information yourself?*
  - *If yes, approximately how much time per week would you spend searching for information?*
  - *If not, what other means do you have of finding find the information (without using the clinical librarian services)?*
5. *Can you give an assessment of the time saved on that occasion?*
6. How valuable was it to the rest of your team?
  - *Do you think it was beneficial to the working of the team?*
  - *Were there any drawbacks in using these services?*
  - *Can you give an approximation of the time the use of these services may have saved the team?*
7. Do you think that as a result of these services being available, you (and/or your team):
  - a) are requesting more literature searches?
    - *If so, approximately how many more per week than before these services were available?*
  - b) are more aware of current developments and research?
    - *If so, has this influenced your clinical practice?*

- c) feel more confident in using library information sources yourself?
    - *Have your searching skills improved? (Please explain)*
    - *Are you able to access more accurate information quicker than before?*
  - d) You may require information URGENTLY and SPECIFICALLY for the care of an individual patient but that information may not be GENERALLY IMPORTANT for the care of other patients. Sometimes the information is of PERSONAL INTEREST to you as you need it for course work, CPD or research.
    - *Approximately, how much time did you spend **last week** searching for information to answer queries which are:*
      - i) *specifically urgent for the care of a patient*
      - ii) *generally important for the care of other patients (but not urgent)*
      - iii) *of personal interest to you (for coursework, CPD or research)*
  - e) Do you generally find what you need?
8. What is your overall impression of the service?
  9. How would you like the service to develop in the future?  
 -----
  10. Why didn't you use the service?
  11. Have any of your team used the services of the clinical librarian?
  12. If yes, what are your team's perceptions of the services?
    - *Do you think that these services were beneficial to the working of the team?*
    - *Were there any drawbacks in using these services?*
    - *Can you give an approximation of the time the use of these services may have saved the team?*

***Thank you for your time***



## Appendix 7 Final questionnaire

(format has changed from the original)

1. **Please look at the following options and select the statements which match your experience.**

I search the NHS Trust website ☐ true ☐ false  
 I use a search engine like Google or Yahoo ☐ true ☐ false  
 I find I am overwhelmed by the amount of information I retrieve ☐ true ☐ false  
 I always find what I want on the Internet ☐ true ☐ false  
 I use printed sources more than the Internet ☐ true ☐ false  
 I find most of my electronic information from databases such as MEDLINE, etc  
☐ true ☐ false  
 I have received library skills training within the last 12 months ☐ true ☐ false  
 I usually ask a librarian for help ☐ true ☐ false  
 If none of the above match your experience, please give details here:

3. **How would you describe your internet searching skill level?**

☐ no experience ☐ beginner ☐ intermediate ☐ good  
☐ advanced

4. **You may sometimes have to check some information about patient care.** You may require the information **URGENTLY and SPECIFICALLY** for the care of **an individual patient** but that information may not be **GENERALLY IMPORTANT** for the care of **other patients**. Sometimes the information is of **PERSONAL INTEREST** to you as you need it for course work, CPD or research. Some searches you may delegate to the **clinical librarian**.

**On average, how much time do you usually spend searching for information to answer queries which are:**

**a) SPECIFICALLY URGENT and GENERALLY IMPORTANT?**

☐ less than 10 mins ☐ more than 10 mins but less than 30 mins  
☐ more than 30 mins but less than 60 mins ☐ more than 60 mins

**Have you delegated, or would you consider delegating such searches to the clinical librarian?**

☐ have done ☐ might consider ☐ would not consider

**b) SPECIFICALLY URGENT but not GENERALLY IMPORTANT?**

☐ less than 10 mins ☐ more than 10 mins but less than 30 mins  
☐ more than 30 mins but less than 60 mins ☐ more than 60 mins

**Have you delegated, or would you consider delegating such searches to the clinical librarian?**

☐ have done ☐ might consider ☐ would not consider

**c) GENERALLY IMPORTANT but not URGENT, not of PERSONAL INTEREST?**

☐ less than 10 mins ☐ more than 10 mins but less than 30 mins  
☐ more than 30 mins but less than 60 mins ☐ more than 60 mins

Have you delegated, or would you consider delegating such searches to the clinical librarian?

☐ have done                      ☐ might consider                      ☐ would not consider

d) **GENERALLY IMPORTANT and of PERSONAL INTEREST?**

☐ less than 10 mins                      ☐ more than 10 mins but less than 30 mins  
☐ more than 30 mins but less than 60 mins   ☐ more than 60 mins

Have you delegated, or would you consider delegating such searches to the clinical librarian?

☐ have done                      ☐ might consider                      ☐ would not consider

e) **PERSONAL INTEREST (to you)?**

☐ less than 10 mins                      ☐ more than 10 mins but less than 30 mins  
☐ more than 30 mins but less than 60 mins   ☐ more than 60 mins

Have you delegated, or would you consider delegating such searches to the clinical librarian?

☐ have done                      ☐ might consider                      ☐ would not consider

4. *Would you recommend a clinical librarian service to other departments or colleagues (assuming that there would be no difference in the quality of service your department receives)?*

☐ yes                      ☐ no                      ☐ unsure

5. *The clinical librarian service has developed in different ways in different departments. Which of the following services do you, or would you, find useful or very useful?*

	<i>very useful</i>	<i>useful</i>	<i>not very useful</i>
<i>Information skills training</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Critical appraisal training</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Informal critical appraisal support</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Journal club support</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Team meeting support</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Synthesis of search summaries</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Search support for guideline development</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Search support for best evidence based practice</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Other (please specify)</i>			

6. The clinical librarian service is at present offered as an 'extra' to the existing library service. If you had up to 20 units of currency to allocate to the following library services, including the clinical librarian service, how would you allocate the 'money' to suit your needs?

	No. of units of currency
<i>Bookstock and Journals (hardcopy)</i>	.....
<i>Journals (online/electronic)</i>	.....
<i>Databases (through HOWIS)</i>	.....
<i>Inter-library loans/document delivery</i>	.....
<i>Information skills support (one to one)</i>	.....
<i>Information skills training with clinical librarian</i>	.....
<i>Information skills training (other)</i>	.....
<i>Critical appraisal skills training (clinical librarian)</i>	.....
<i>Journal club support (clinical librarian)</i>	.....
<i>Other clinical librarian services</i>	.....
<i>Other service(s) (please specify)</i>	.....

7. Can you estimate what **percentage** of your information needs are related to :

Research	..... %
Education	..... %
Patient Care	..... %
Audit	..... %
Other (please state)	..... %

**Thank you for your cooperation**

(Please indicate your profession)

Doctor ☐ Nurse ☐

PAM ☐ Other ☐

## Appendix 8 Control group questionnaire

1. Please look at the following options and select the statements which match your experience.

I search the NHS Trust website	<input type="checkbox"/> true	<input type="checkbox"/> false
I use a search engine like Google or Yahoo	<input type="checkbox"/> true	<input type="checkbox"/> false
I find I am overwhelmed by the amount of information I retrieve	<input type="checkbox"/> true	<input type="checkbox"/> false
I always find what I want on the Internet	<input type="checkbox"/> true	<input type="checkbox"/> false
I use printed sources more than the Internet	<input type="checkbox"/> true	<input type="checkbox"/> false
I find most of my electronic information from databases such as MEDLINE, etc	<input type="checkbox"/> true	<input type="checkbox"/> false
I have received library skills training within the last 12 months	<input type="checkbox"/> true	<input type="checkbox"/> false
I usually ask a librarian for help	<input type="checkbox"/> true	<input type="checkbox"/> false

If none of the above match your experience, please give details here:

2. How would you describe your internet searching skill level?

☐ no experience   ☐ beginner   ☐ intermediate   ☐ good   ☐ advanced

**At present, the clinical librarian service is offered as an “extra” to the existing library service. The clinical librarian goes out of the library and attends team meetings, provides search support for guideline development and evidence based practice, offers individually tailored information skills training sessions and critical appraisal training and facilitates journal clubs.**

3. If you had up to 20 units of currency to allocate to the following library services, including the clinical librarian service, how would you allocate the ‘money’ to suit your needs?

	No. of units of currency
<i>Bookstock and Journals (hardcopy)</i>	.....
<i>Journals (online/electronic)</i>	.....
<i>Databases (through HOWIS)</i>	.....
<i>Inter-library loans/document delivery</i>	.....
<i>Information skills support (one to one)</i>	.....
<i>Information skills training with clinical librarian</i>	.....
<i>Information skills training (other)</i>	.....
<i>Critical appraisal skills training (clinical librarian)</i>	.....

*Journal club support (clinical librarian)* .....

*Other clinical librarian services* .....

*Other service(s) (please specify)* .....

4. Can you estimate what **percentage** of your information needs are related to :

Research ..... %

Education ..... %

Patient Care ..... %

Audit ..... %

Other (please state) ..... %

**Thank you for your cooperation**

(Please indicate your profession)      *Doctor* ☐      *Nurse* ☐

*AHP* ☐      *Other* ☐

(NB format has changed from the original)

## Appendix 9 Inter-library loan statistics

Interlibrary loan statistics.

	Before Clinical librarian	Average per month	After Clinical Librarian	Average per month
John Spalding Library (Wrexham Psychiatry team)	130 (Oct 02-Sep 03)	10.8	297 (16 months, Oct 03-Jan 05)	21.2
Glan Clwyd – CL teams		Less than three	165 (Oct 03-Jan 05)	10.3
Glan Clwyd - total 2003		410		
Glan Clwyd 2004				367

The chart below indicates that over the past five years interlibrary loan requests at Glan Clwyd have fluctuated slightly. There may be a downwards trend with greater access to e-journals freely available, but the volume of requests may be rising as more people access research articles. The number of items received (i.e. items requested by Glan Clwyd staff) is reasonably steady. On the other hand, the volume of requests from other libraries (other NHS staff in Wales) is increasing.

